COUNTY BOROUGH OF ST. HELENS.

CANCELLED

Annual Report

ON THE

Health and Sanitary Circumstances of the Borough

FOR THE YEAR 1913,

—BY—

JOSEPH CATES,

M.D., Lond., D.P.H., Camb.

Medical Officer of Health,

School Medical Officer.

St. Helens:
WESTWORTH & SONS, PRINTERS AND STATIONERS, LOWE STREET.

1914.

ROYAL SOCIETY OF MEDICINE
20
DEC
1935
CATALOGUED

Eccleston Hall Sanatorium.—Administrative Block.

61042

COUNTY BOROUGH OF ST. HELENS.

CANCELLED
SOCIETY OF MEDICINE
20 DEC 1935

41ST

Annual Report

OF THE

Medical Officer of Health.

—BY—

JOSEPH CATES,

M.D., State Medicine. B.S., (Lond). D.P.H., (Camb).

Fellow of the Royal Society of Medicine and Member of the Epidemiological Section, Fellow of the Society of Medical Officers of Health and Member of the Royal Sanitary Institute, Formerly Demonstrator of Public Health at King's College, London, Assistant Medical Officer of Health to the County Borough of Coventry, Medical Officer of Health and School Medical Officer to Borough and Port of Lancaster.

1913.

St. Helens:
Westworth & Sons, Printers and Stationers, Lowe Street.

1914.

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HEALTH COMMITTEE.

THE RIGHT WORSHIPFUL THE MAYOR
(SIR DAVID GAMBLE, BART, J.P.)

ALDERMAN H. B. BATES, L.S.A., *Chairman.*

ALDERMAN J. FORSTER, J.P., *Deputy-Chairman.*

ALDERMAN J. GREEN, J.P.

COUNCILLOR T. ABBOTT.

COUNCILLOR J. A. BARON.

COUNCILLOR R. ELLISON.

COUNCILLOR W. FORSHAW.

COUNCILLOR J. H. FOX.

COUNCILLOR T. HAMBLETT.

COUNCILLOR R. JACKSON, M.B.

COUNCILLOR H. H. PEET.

COUNCILLOR J. PHYTHIAN.

SUB-COMMITTEES.

HOSPITALS.

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ALDERMAN H. B. BATES, L.S.A.

ALDERMAN J. FORSTER, J.P.

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COUNCILLOR R. JACKSON, M.B.

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ALDERMAN H. B. BATES, L.S.A.

ALDERMAN J. FORSTER, J.P.

ALDERMAN J. GREEN, J.P.

COUNCILLOR J. A. BARON.

COUNCILLOR R. ELLISON.

COUNCILLOR J. H. FOX.

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ALDERMAN J. FORSTER, J.P.

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ALDERMAN H. B. BATES, L.S.A.

ALDERMAN J. FORSTER, J.P.

ALDERMAN J. GREEN, J.P.

COUNCILLOR J. A. BARON.

COUNCILLOR W. FORSHAW.

TUBERCULOSIS (Consultative).

The Right Worshipful the Mayor.
Alderman H. B. Bates, L.S.A.
Alderman J. Green, J.P.
Councillor T. Abbott.
Councillor J. A. Baron.
Councillor J. H. Fox.
Councillor H. H. Peet.
Councillor J. Phythian.

TUBERCULOSIS (Animals).

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Alderman H. B. Bates, L.S.A.
Councillor J. A. Baron.
Councillor R. Jackson, M.B.
Councillor H. H. Peet.
Councillor J. Phythian.

HOUSING.

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Alderman J. Forster.
Councillor T. Abbott.
Councillor W. A. Brooke.
Councillor R. Ellison.
Councillor W. Forshaw.
Councillor T. Hamblett.

EDUCATION COMMITTEE.

Alderman W. W. Pilkington .....*Chairman.*
Councillor J. Heaton.....*Deputy-Chairman.*
and the whole of the Members of the Council,
with the following co-opted Members :—

Mrs. M. J. Hammill.
Mrs R. Pilkington.
Mr. J. E. C. Else.
Mr. K. Forbes, (Liverpool University Representative)
Mr. J. Frodsham.
Sir D. Gamble, Bart.
Mr. T. Jenkinson.
Mr. L. E. Pilkington, (Lancashire County Council Representative)
Mr. G. Stringfellow.
Mr. E. W. Swift.

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Alderman W. W. Pilkington .....*Deputy-Chairman.*

The Right Worshipful the Mayor.
Alderman H. B. Bates. L.S.A,
Alderman C. J. Bishop, J.P.
Alderman A. J. Foote.
Alderman J. Forster, J.P.
Alderman H. Martin, J.P.
Councillor T. Abbott.
Councillor W. Collier.
Councillor J. Crooks, J.P.
Councillor W. Forshaw.
Councillor P. Glynn.
Councillor T. Hamblett, J.P.
Councillor R. Jackson, M.B.
Councillor P. Phythian, J.P.
Councillor G. P. Varley.
Councillor W. Woodcock.

AND

Mrs. M. J. Hammill
Mrs. R. Pilkington.

STAFF
OF THE MEDICAL OFFICER'S DEPARTMENT.

Medical Officer of Health, Chief Tuberculosis Officer, Medical Officer of the Education Committee, and Medical Superintendent of the Corporation Hospitals—

JOSEPH CATES, M.D., D.P.H.

Deputy Medical Officer of Health and Tuberculosis Officer—
S. J. C. HOLDEN, M.B., D.P.H.

Assistant Medical Officer of Health—
FRANK HAUXWELL, M.B., D.P.H.

W. J. MILLIGAN, (1), ...	.. Chief Inspector of Nuisances.
J. ALMOND (1), (4), (6) ..	.. District Inspector.
H. Brown, (1), (4), (5), (6), (9) ..	.. District Inspector.
F. COLLIER, (1), (4), (5), (6), (7)	.. Housing, Shops, and Workshops Inspector.
H. LOWE, (4), (6)	.. District Inspector.
J. SKEATH, (4)	.. Drainage and Shops Inspector.
T. BLASHILL, (1), (5)	.. Superintendent of the Public Abattoir.
MARGARET BURGESS	Matron of the Corporation Hospitals.
RUTH APPLETON, (3)	Health Visitors and School Nurses.
ETHEL DENMAN, (1), (3), (8)	
MARY DUDLEY, (2), (8)	
JEANNIE GRIME, (8)	
AGNES M. JOLLIFFE, (3), (8)	
ADA ROGERSON, (3)	
JOSEPHINE SEPHTON, (8)	
ROBERT H. JACKSON ..	.. First Class Clerk.
HENRY CASSEL ..	.. Clerk Dispenser.
ARTHUR HARRISON ..	.. Third Class Clerk.
THOMAS G. ELLIS ..	.. Junior Clerk.
WILLIAM TAYLOR ..	.. Junior Clerk.

(1) *Sanitary Inspector's Certificate of the Royal Sanitary Institute.*
(2) *Health Visitor and School Nurse's Certificate of the Royal Sanitary Institute.*
(3) *Certificate of the Central Midwives Board.*
(4) *Sanitary Inspector's Certificate of Liverpool University.*
(5) *Certificate for Meat Inspection of the Royal Sanitary Institute.*
(6) *Certificate for Meat Inspection of the Liverpool University.*
(7) *Certificate for Building Construction (advanced) (Board of Education).*
(8) *A trained nurse.*
(9) *Certificate for Building Construction, 1st stage.*

Two Disinfectors, two Hospital Porters, a Conversions Assistant, a Laboratory Assistant, etc.

The following are part time officers—

G. H. Cooke, M.D., Surgeon for Throat and Nose Dept. at the School Clinic.

J. H. Dow, M.R.C.S., L.R.C.P., Anæsthetist at the School Clinic.

A. S. Wilson, M.B., Ch.B., Ophthalmic Surgeon at the School Clinic.

J. Unsworth, M.B., B.S., Physician to X-ray Dept. at the School Clinic and Tuberculosis Dispensary.

L. W. Biscombe, L.D.S., } Dental Surgeons at
D. C. L. Orton, M.R.C.S., L.R.C.P., L.D.S. } the School Clinic.

H. E. Davies, M.A., B.Sc., F.I.C., Analyst.

W. G. Dixon, M.R.C.V.S., Veterinary Inspector.

TO THE CHAIRMAN AND MEMBERS
OF THE HEALTH COMMITTEE.

GENTLEMEN,

I have the honour to present the following report, which deals with the health and sanitary circumstances of the borough for the year ending 31st December, 1913, and reviews the work carried out under the direction of your medical officer.

In July, I was appointed to succeed Dr. Buchan ; a considerable portion of this report therefore is a record of his administration.

The population of the district continues to show a substantial increase ; the birth-rate, although declining, is still one of the highest in the country. Unfortunately, however, a considerable proportion of the infants fail to survive the first year of life,—during the period under consideration one death occurred among every six children born. The general death-rate and the mortality from the principal infectious diseases exceeded the figures for the previous year. This is mainly due to a large number of fatal cases of measles and diarrhœa.

Several important features have characterised the work of the Committee ; a complete scheme has been established, with the cordial assistance of the local Insurance Committee, to provide treatment for all persons suffering from pulmonary tuberculosis. Steps have been taken whereby medical practitioners may obtain, free of cost, a report on suspected cases of venereal disease. A great scarcity of houses suitable for the working classes has led to the consideration of the best means whereby accommodation may be afforded by the Corporation. Reports on " the After Care of the Consumptive " by Dr. Holden, and on " the Treatment of Scabies " by Dr. Hauxwell, are issued as an appendix to my annual report. It gives me pleasure to refer to the willing and satistactory manner in which the members of my staff have carried out their duties.

I am, Gentlemen,

Your obedient servant,

JOSEPH CATES,

Town Hall,
St. Helens.
March 18th, 1914.

SUMMARY FOR 1913.

POPULATION—Estimated to the middle of the year—				
	Males ...	51925	Total ...	99,460
	Females ...	47535		
Increase during the year				1,301

MARRIAGES				730
Annual rate of persons married per 1000 of the population ...				14·67

BIRTHS	Males ...	1619	Total ...	3199
	Females ...	1580		
Annual rate of births per 1000 of the population				32·16

DEATHS	Males ...	1008	Total ...	1886
	Females ...	878		
Annual rate of mortality per 1000 of the population	Males ...	19·3	Total ...	18·96
	Females	18·4		
Do. corrected for age and sex distribution of the population				20.44
Total deaths from zymotic diseases				372
Annual rate of mortality from zymotic diseases per 1000 of the population				3·74
Infant mortality rate per 1,000 births				155

ANNUAL REPORT

ON THE HEALTH AND SANITARY CIRCUMSTANCES OF THE BOROUGH FOR THE YEAR 1913.

NATURAL AND SOCIAL CONDITIONS.

St. Helens is situated in the south-west of Lancashire, about ten miles north-east of Liverpool and twenty miles west of Manchester. The coast is nearest at Seaforth, a town at the mouth of the Mersey, twelve miles west of the borough.

The line of the borough boundary is roughly the circumference of a circle, the centre being at Peasley Cross, and the radius a distance of about two miles.

The area is about 7,285 acres: the rateable value on the 31st March, 1913, was £405,953. A penny rate under Section 211 of the Public Health Act, 1875, is estimated to yield £1,471.

On the north-east are the urban districts of Haydock and Ashton-in-Makerfield, and the rural district of Warrington. With these exceptions, the borough is bounded by the Whiston rural area.

From the south-west corner of the borough, about 270 feet above sea-level, the ground slopes gradually towards a belt of low-lying land extending from east to west across the district, and traversed by small streams which unite in the eastern part of the area to form the Sankey brook. One of these watercourses, known as Windle brook, passes through the centre of the thickly populated, north-western division of the borough. It appears that the older portions of the town were built along the banks of this stream. The land in the northern part of the borough also inclines towards the Windle brook.

Between St. Helens and the coast, the land generally is low-lying and used for agricultural purposes.

The borough is divided into nine wards. The inter-leaved diagram marked 1,* shows the position, acreage, estimated population for 1913, and density of each, calculated on the approximate area built upon.

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* The inter-leaved diagrams and tables follow page 59.

RAILWAYS AND ROADS.

The district is served by two railways. A branch of the London and North Western from Liverpool to Wigan passes through the town in a northerly direction. The Liverpool and Manchester line of the same railway traverses the southern portion of the district, giving off a branch from St. Helens Junction into the centre of the town.

The Great Central Railway has a terminus in St. Helens, from which a line passes through the north-east of the borough to Manchester. There are also several lines used only for colliery purposes.

About twelve roads converge from the outskirts of the borough. The more important of these are from Warrington, Widnes, Liverpool, Ormskirk, and Wigan. There is a main road through the town from Liverpool to the north.

A canal from Widnes and Warrington enters the borough on its eastern boundary. Passing in a westerly direction it terminates near Gerards Bridge: a branch into the centre of St. Helens crosses Windle brook. For a considerable distance the canal closely follows the course of the Sankey brook.

GEOLOGY.

St. Helens lies on the southern fringe of the Lancashire coal fields. The coal measures of this district join those of Prescot round the north end of a promontory of New Red sandstone at Eccleston Hill. The western boundary of the coal measures is a large fault which throws down the New Red sandstone ranging north, ... from Elton Head to the big dam at Eccleston . . . . . The boundary along the south and east is, as far as can be ascertained, on direct super-position of the trias or the Permian rocks on the coal formation. The beds which appear to rest on the coal measures at Sutton, belong to the Lower Red sandstone. Out-crops of the various coals have been discovered at the big dam at Eccleston, at Elm Grove, Thatto Heath, and other parts of the borough. Above the deeper coal measures are beds of unproductive coal, insufficiently thick for working. The only locality within the district where strata referable to the Permian period are known to exist, is at Sutton. The formation elsewhere consists of two divisions, the Lower Red Sandstone, forming the base, overlain by purple marls with bands of fossiliferous limestone. A sub-division of New Red sandstone, known as the Lower Mottled sandstone, may be seen at Eccleston and St. Helens Junction. It is of no great thickness and appears to rest directly on the coal measures at Eccleston

Hall. Another sub-division, the Pebble Beds, occurs in the southern portion of the borough. At Eccleston Hill the Corporation Waterworks have been sunk into these beds. The superficial deposits consist of boulder clay in the low ground and valleys, Sherdley Hill sands in the north-western portion of the borough, and peat on the southwestern extremity of the district.*

METEOROLOGY.

At the Corporation Observatory in Victoria Park, readings are taken once a day, at 9 a.m.

Chart 2 shows the annual rainfall in St. Helens since 1889.

The temperature of the soil four feet below the surface during 1913 will be seen in chart 3. The importance of this record arises from the fact that it has been shown that a soil tempertaure of 56° F. at a distance of four feet below the surface is often associated with an increase in the number of fatal cases of infantile diarrhœa.

Table 4 gives the weekly record of readings taken at the Victoria Park during the year.

HISTORY OF THE TOWN.

Although the townships now comprising the borough are rich in ancient history, the borough itself is comparatively of recent date. A charter of incorporation was granted in 1868, including the whole of the townships of Sutton and Parr and parts of those of Eccleston and Windle. The borough was then divided into six wards, but in 1889 a re-distribution was carried out, increasing the number to nine. In the same year St. Helens became a county borough. In 1893 the borough boundaries were extended by the taking in of a further portion of Eccleston. From Chart 5, which shows the population of the town at each census period since 1801, it will be seen that a somewhat large increase in inhabitants has occurred on each occasion.

INDUSTRIES AND OCCUPATIONS.

The census returns for 1911 give the occupations of the inhabitants as follows :—

Out of 37,929 males, 10 years of age and upwards, 32,211 were stated to be engaged in some occupation. 911 were employed on railways—565 as carmen. 9,440 in mines and quarries, of this number 4,802 were workers

* Memoir of Geological Survey, 1882.

at the face and 3,687 were below ground. 7,701 were workers in brick, pottery and glass, of these 5,209 were employed in sheet or plate glass manufacture—1,871 in the making of glass bottles. 1,168 were engaged in the manufacture of chemicals and of this number 1,044 were employed in alkali manufacture.

Among 34,190 females at ages of 10 years and over, 6,843 were stated to be engaged in occupations. 481 in teaching, 1,649 as domestic servants, 176 as workers in mine service above ground. 860 were employed in brick, pottery and glass work, of this number 497 were working in plate or sheet glass manufacture, and 134 in the making of glass bottles. 542 were dressmakers. Out of 6,843 females engaged in occupations, 5,685 were unmarried, 672 married, and 486 were widows.

POPULATION.

The estimated population of the borough at the middle of 1913 was 99,460, being 51,925 males and 47,535 females. Table 6 gives the number of inhabitants of each ward as shown by the census returns of 1911.

The age and sex distribution of the population at the time of the last census is set out in table 7.

Table 8 gives the number of persons resident in the various institutions of the borough at the census period 1911, and also the figures for 1913.

An inquiry carried out during the last week of December, 1913, showed the following figures respecting the number of unoccupied buildings in the borough.

WARD.	Premises vacant.	Number closed as unfit for habitation.	Number of shops vacant.	Number of large houses vacant.	Number of houses for working classes vacant.	Number actually to be let.
North Eccleston...	7	0	4	0	3	0
South Eccleston...	17	11	1	2	3	1
Central	30	13	16	0	1	0
North Windle.....	8	3	0	3	2	1
South Windle.....	11	6	4	0	1	0
Hardshaw	14	11	2	0	1	0
East Sutton	22	16	2	0	4	1
West Sutton	14	11	1	0	2	0
Parr.....	31	27	1	0	3	0

It will be seen that at the time of the inquiry there were available only three houses at a rental suitable for the working classes; 84 new houses were in the course of erection.

NUMBER OF PERSONS PER INHABITED BUILDING.

The following table shows the average number of persons per inhabited building, and the average number of persons per family revealed by the census returns of 1901 and 1911 :—

Average number of persons per inhabited building.		Average number of persons per family.		
		1901	1911	
1901	1911	All dwellings.	All dwellings.	Ordinary dwelling houses.
5·60	5·49	5·48	5·41	5·31

The number of unmarried, married, and widowed persons per thousand of each sex, aged 20 years and upwards according to the census returns was as follows :—

Males.			Females.		
Unmarried.	Married.	Widowed.	Unmarried.	Married.	Widowed.
350	591	59	229	667	104

Comparative statistics show that St. Helens is fourth among the county boroughs for a high proportion of unmarried males, and occupies a similar position as regards married females.

CLASSIFICATION OF BUILDINGS.

The census returns for 1911 give the following figures relating to the buildings in the borough :

	1901	1911.									
		Total buildings used as Dwellings.	Ordinary dwelling houses.	Blocks of Flats.	Shops.	Hotels, Inns, and Public Houses.	Offices, Warehouses, Workshops & Factories.	Institutions.	Others.	Vessels, Sheds, Vagrants, &c.	Separate Flats (included in Col 5)
Number Inhabited..	15,061	17,585	16,410	1	954	185	1	28	6	—	1
Separate Occupiers..	15,390	17,833	16,652	1	957	186	1	28	6	2	1
Population	84,410	96,551	88,398	4	4,897	1,201	7	2,003	33	8	4
Uninhabited	815	392	338	—	51	1	1	1	—	—	—
Being built.....	123	57	56	—	1	—	—	—	—	—	—

BUILDINGS NOT USED AS DWELLINGS.

Places of Worship.	Government and Municipal Buildings.	Shops.	Offices.	Warehouses, Workshops, and Factories.	Theatres, and other places of Amusements.
56	13	497	98	163 .	3

Table 9 shows the number of persons per tenement at the time of the census in 1911, a tenement being defined as " a place in which any person entitled to receive a census schedule shall live."

The figures in tables 9, 10, 11, 12, give rise to certain important considerations. St. Helens, among the county boroughs and large towns, at the time of the census had the *lowest* proportion per 1,000 families, of families of *less than four* persons, and the *highest* proportion of families of *over six persons.* In this district, a high percentage of large families corresponds with a high birth-rate.

With regard to room accommodation in St. Helens, 16·9 per cent of the population had less than one room for two persons, the average number of persons per room being 1·24. The number of persons per inhabited house was 5.49.

The number of inhabited houses in St. Helens at the middle of 1913 was 18,248, giving an estimated population of 100,364. The number of inhabited houses at the end of 1913 was 18,295, an increase of only 189 over the figures for the previous twelve months.

BOARD OF TRADE LABOUR EXCHANGE.

The following figures show the number of applications for employment received, the number of vacancies notified by employers and the number of vacancies filled, for the twelve months ending the 16th January, 1914. The figures, which do not include vacancies of a casual nature, are indicative of the valuable work carried on by the Exchange :—

	Number of applications for employment.	Number of individuals making such application.	Number of vacancies notified.	Number of vacancies filled.	Number of applicants placed in other districts
Men	3233	2331	1438	1056	140
Women ...	1024	748	447	338	79
Boy	187	168	220	155	8
Girls	478	389	161	133	18
Total ...	4922	3636	2266	1682	245

POOR LAW AND OTHER FORMS OF RELIEF.

The amount of out-door relief in money and kind supplied by the Guardians during the year ending the 30th September, 1913, to persons resident within the borough, and chargeable to the Union was £5,948 - 1 - 10·

It has been found impossible to obtain figures showing the amount of pauperism in the borough for a series of years.

A local branch of the Charity Organization Society has afforded assistance to 69 applicants during 1913, a sum of £14 - 3 - 4 being expended in suitable relief.

A Police Aided scheme to provide clothing for destitute children is in existence in the borough. As a result of useful work carried out during the past year, 1,059 children received foot-gear and clothing, 3,421 articles being distributed.

Free meals to the number of 17,538 were provided by the local Education Authority for children selected from a school population of 20,170.

MEDICAL AND SURGICAL ASSISTANCE.

There are two general hospitals in St. Helens, containing 185 beds for the relief of those residing within the borough and the surrounding district. During the year, 2,461 in-patients and 938 out-patients received treatment.

Accommodation is provided by the Corporation at the borough isolation

hospitals for persons suffering from scarlet fever, diphtheria, enteric fever, smallpox, tuberculosis and certain other infectious diseases.

A voluntary Association for the aid of crippled children has rendered valuable help during the year to 170 patients, by the provision of apparatus and spinal carriages.

A Fresh-Air Fund sent 92 children to convalescent homes for a period of at least three weeks, and also provided in other ways for a large number of cases.

The Education Authority contributed £411 - 0 - 4 towards the maintenance of children at surgical homes and other institutions.

A Nursing Association, by means of voluntary contributions, maintains a superintendent and seven nurses to attend suitable cases in their own homes. 1,249 new cases were nursed during the year, 39,679 visits being made.

SANITARY CIRCUMSTANCES.

WATER SUPPLY.

The Council supply water to the district under the provisions of the St. Helens Improvement Act, 1869, and the St. Helens Water Act, 1882.

Water is obtained from deep wells in the new red sandstone. There are six pumping stations with a daily supply of about 5,700,000 gallons. From the various wells water is pumped to a central reservoir, and before being distributed is softened by a liming process, the average hardness before and after softening being, according to Clark's scale, 20.9° and 10.16° respectively. During the year ending the 31st December, 1913, 1,369,347,000 gallons were used, 868,760,000 being domestic supply, and 500,587,000 for trade purposes. The vast majority of houses in the borough are supplied from the Corporation mains. The supply is constant, and in periods of prolonged drought has proved sufficient. A few farms and cottages in the outlying districts are still supplied from shallow wells. The average daily consumption per head for domestic purposes is about 23 gallons, and for other than domestic purposes, 13 gallons.

Chemical and bacteriological analyses which are carried out at regular intervals show that the water, although very hard, is of a high degree of purity. There is no evidence of metallic or other contamination.

RIVERS AND STREAMS.

The Sankey brook, formed by the union of Windle, Sutton and Rainford brooks together with several small watercourses, passes through the north-

Eccleston Hall Sanatorium.—Pavilions.

eastern quarter of the borough, closely following the course of the St. Helens Canal. It receives the effluent from the Corporation sewage works and also an amount of untreated sewage. Trade effluent from various works passes into the brook.

DRAINAGE AND SEWAGE.

Drains are laid in practically the whole of the populous portions of the borough. There is separation of sewage and storm water in the Denton's Green and Newtown districts, surface and storm water being turned into Windle brook. In the outlying districts a number of houses have been built in a situation remote from a sewer. About three-quarters of the sewage of the borough is treated at the Parr sewage works by liming and sedimentation; the effluent, varying greatly in composition, is discharged into the Sankey brook. The remainder of the sewage is turned, untreated, into the same watercourse. The bulk of the material collected from the conservancy system is treated at a depot at Parr. A portion of the substance obtained from privy middens is sold to farmers, the remainder is mixed with the contents of the tubs and pails, and converted into artificial manure.

CLOSET ACCOMMODATION.

Until recent years the privy midden or the tub and pail closet was general throughout the borough. After several attempts to deal with the conversion of the older types of conveniences, the Council in 1911 decided that all privy middens and tub and pail closets should be converted to the water carriage system. It was decided, therefore, to divide the borough into five districts, and to attempt to carry out the conversions in one of these districts in a year. It was estimated that the average cost of the conversion of a privy midden might be taken as £8. Towards this amount the Council makes a grant of a basin, seat, cistern, pull and flush pipe, of the approximate value of 30/–. In order that the grant may be obtained, the Corporation has to be satisfied with the general sanitary requirements of the house to which the privy is attached.

The cost of the conversion of a tub and pail closet was estimated to be £5 - 7 - 0. Towards this amount the Council makes a similar grant of fittings and a payment of £1 - 7 - 6. In this case also the owner must carry out such general sanitary improvements to the house as may be required.

The following table shows the estimated number of houses with the various types of sanitary conveniences existent in the borough each year since 1907.

Year.	Water closet.	Tub and pail closet.	Privy midden.	Total.
1907 ...	6106	7150	5154	18409
1908 ...	6503	7120	4907	18530
1909 ...	6718	7071	4795	18584
1910 ...	7041	7028	4616	18685
1911 ...	7626	6863	4338	18827
1912 ...	9205	5734	4019	18958
1913	10493	5058	3542	19093

During 1913 a considerable amount of work has been done in carrying on the conversion scheme. 460 privy-middens and 646 tub and pail closets have been altered to water closets; 30 privy middens and 22 tub and pail closets have been demolished in the course of housing operations.

PUBLIC CONVENIENCES.

There are fifteen of these situated in various parts of the town. Eleven are modern structures, but in only one instance is there water closet accommodation. Additional provision is urgently needed, both as regards closets and also urinals for women.

PUBLIC BATHS.

These are situated in Boundary Road the number of baths used during the year was as follows:—

Plunge baths	69,353
Slipper baths	6,005
Vapour baths	59
	75417

REMOVAL OF HOUSE REFUSE.

Removal of house refuse, and the emptying of tub and pail closets and privy middens are undertaken by the Corporation. The removal of the contents of privy middens is carried out three times a year, and at less infrequent intervals on request. Pail closets and ashplaces are emptied weekly. Fish refuse and other material liable readily to decompose are taken away about twice a week. Bricked ashpits and ashplaces with wooden doors are general in the borough. The conversion of these to moveable wall bins of the tippler type is being proceeded with, 95 were converted during the year. In new houses the provision of moveable bins is general.

About three-quarters of the house and trade dry refuse is treated at a destructor in Boundary Road. During 1913, 14,888 tons were destroyed. The actual cost of labour per ton for destruction only was 1s. 1d., the approximate allowance for the sale of steam amounted to £540.

SCAVENGING.

Street sweeping is carried out by the Corporation. Cobble paving, to be found in many of the streets, renders the work difficult. The main streets are cleansed about twice a week : the side streets and passages once a week. The cleansing and sweeping of footpaths is the duty of occupiers.

The general condition of the streets, passages, and footpaths as regards cleanliness is far from satisfactory.

A considerable number of uncovered, bricked manure middens exist in the thickly populated portions of the district. The surface of these is generally below the level of the ground. In the summer months a mass of highly objectionable and readily decomposible material affords a suitable breeding ground for an innumerable number of flies. The importance to the public health of properly constructed manure middens, the contents of which are removed at regular and frequent intervals, cannot be over estimated.

SANITARY INSPECTIONS OF THE DISTRICT.

The total number of visits made by the staff of the medical officer's department during the year was 29,544.

Table 13 contains a list of notices served during 1913, and a record of previous years.

CHOKED DRAINS.

When it is discovered that a drain is choked an officer of the department attempts to remove the obstruction before a notice is served on the owner or occupier. During the year, 754 drains were plunged, and in 613 instances the obstruction was removed.

CLEANSING OF PREMISES.

A whitewash brush and a supply of lime were provided for the use of 208 persons unable to pay for the necessary cleaning of their houses.

PREMISES AND OCCUPATIONS CONTROLLED BY BYE-LAWS OR REGULATIONS.

COMMON LODGING HOUSES.

There were in the borough at the beginning of the year, 13 common lodging houses, for the reception of 616 lodgers. Two houses were added to the register during the year, and one was removed from it.

No infringements of bye-laws were discovered during the course of 309 inspections.

At the end of the year, as the result of a special inquiry into the structural conditions and general surroundings of the houses, the Committee decided to warn ten of the occupiers that the yearly renewal of registration might not be granted on the next occasion, unless the houses were put into a satisfactory condition.

Some improvement has been shown in the manner in which the houses are conducted.

HOUSES LET IN LODGINGS.

There were 34 houses on the register at the end of the year. The structural conditions of the majority are unsatisfactory, but the houses are on the whole moderately well kept. Twenty-eight defects were discovered in the course of 131 inspections.

BAKE-HOUSES.

There are 113 of these on the register, of which one is an underground bakehouse. Mechanical power is used in 14 instances.

The following contraventions were discovered during the year :—

Walls and ceiling requiring lime-washing	1
Drain opening into bake-house	1

both defects were remedied.

The bake-houses vary much in structure and general sanitation. The more modern buildings are in every way satisfactory. In view of the dangers which may arise from the preparation, and storage of food in insanitary surroundings, it is reasonable to require a high standard of personal cleanliness in those engaged in the work, and faultless sanitation in the premises occupied.

CANAL BOATS.

The borough surveyor is inspector under the Canal Boats Acts. There were no canal boats on the register for 1913. Three boats were inspected,

no infringements of Acts or Regulations were discovered, no instances of infectious disease were reported, nor were any boats detained for cleansing or disinfection.

OFFENSIVE TRADES.

Nine offensive trades are carried on within the borough :—

Tripe boiler	5
Manure manufacturer	1
Fat melter	1
Bone boiler	1
Gut scraper	1

The premises have been regularly visited and although in several cases structurally unsuitable, no serious cause of complaint has arisen.

Permission was given by the Council during the year for the establishment of the business of a tripe boiler at premises in Warrington New Road.

CELLAR DWELLINGS.

There is no record of any underground room having been separately occupied as a dwelling during the year.

SMOKE ABATEMENT.

Special observations were made on 104 occasions. In no instance was a caution required with regard to nuisances arising from black smoke.

A complaint was received of a nuisance arising from smoke emitted from engines standing at a siding. The matter was taken up with the railway company and certain alterations were suggested which, if carried, out, may remove the cause of complaint.

The following table shows the percentage of offences to the number of observations made each year since 1903 :—

1903	22·1
1904	16·9
1905	14·9
1906	11·7
1907	11·7
1908	8·02
1909	4·8
1910	8·2
1911	6·8
1912	2·5
1913	0·0

There is still room for considerable improvement in the character of smoke allowed to issue from chimneys in the district.

SCHOOLS.

Reference to the sanitary conditions and water supply of the schools will be found on page 63.

An account of the administrative control over infectious disease in schools is given on page 81.

FOOD.

MILK SUPPLY.

COW-KEEPERS AND COWSHEDS.

Twenty-eight persons are registered as cow-keepers, one being added to the register duirng the year. There are approximately 250 cows kept for dairy purposes within the district. An inspection of the animals is carried out twice a year, and when necessary at more frequent intervals, by a veterinary inspector appointed by the Council. Three defects in the cowsheds were reported during 1913. Some of the sheds, however, are unsuitable for the housing of dairy cattle, and generally speaking, insufficient use is made of the means of ventilation provided. A considerable amount of ignorance and prejudice still exists concerning the ventilation of cowsheds. As a result of investigations carried out by the Edinburgh College of Agriculture it has been shown that cows kept in a cool, well ventilated byre give as large an amount of milk as animals in a warm, moist, vitiated atmosphere, and moreover, as might be expected, are better in health. In some parts of the country it is becoming customary to house dairy cows in sheds which are open to the atmosphere on one side. The results of this open-air method have fully justified the experiment.

MILK SHOPS.

During 1913, 8 milk shop keepers were added to the register and 8 removed, 115 remaining on the register at the end of the year.

One of the least desirable features of the milk trade as at present conducted, is the frequency with which milk is exposed to the risk of contamination through being stored and sold in shops of general dealers. The following is a list of the trades carried on by persons registered for the sale of milk :—

General dealers	53
Confectioners	14
Milk only	28
Other trades	20

TUBERCULOUS MILK.

No systematic bacteriological examination has been made of milk sold within the borough. Seven animals were reported during the year to be suffering from tuberculosis and were slaughtered by the Local Authority under the provisions of the Tuberculosis (Animals) Order, 1913.

MEAT.

A municipal abattoir was built in 1895 and extended in 1901 at an approximate total cost of £7,500. The building is in a central position and has in connection with it cold air stores. Meat inspection at the abattoir is carried out by the superintendent who holds a certificate in meat inspection. A similar certificate is held by four of the assistant inspectors. In cases of difficulty reference is made to the medical officer of health. 3,206 beasts 292 calves, 5,393 sheep and 3,401 pigs were killed in the public slaughter house during the year. No utilisation is made of the offal or other waste products. The value to the public health of an abattoir where slaughtering of animals and dressing of carcases is carried out under direct supervision is very considerable. Unfortunately, however, a proportion of the meat sold in the district is prepared outside the borough, in places where efficient inspection is impossible. It appears very desirable that all meat brought into the district for sale should be first passed through a clearing-house, and until this is accomplished no system of meat inspection can be considered perfect. Five private slaughterhouses still remain in the borough. Four are licensed for the slaughter of cattle and pigs, and one for pigs only. The private slaughter-houses are regularly visited by the inspectors, frequent visits being paid when slaughtering is expected to occur. The licensee of each private slaughter-house keeps a register of animals slaughtered and makes a weekly return to the medical officer of health. An inspection of meat exposed for sale is regularly carried out. The numbers of animals killed in the private slaughter houses during the year were 78 beasts, 47 calves 522 sheep, 2,310 pigs.

The following table shows the number of animals found on slaughter to be diseased, and the approximate weights of meats condemned at the abattoir and at the private slaughter-houses.

	Abattoir.				Private slaughter houses.			
	Killed.	Diseased.		Weight in lbs.	Killed.	Diseased.		Weight in lbs.
		Tuberculosis.	Other diseases.			Tuberculosis.	Other diseases.	
Beasts	3206	400	304	33250	78	11	0	173
Calves	292	0	1	50	47	0	0	0
Sheep	5393	0	45	220	522	0	0	0
Pigs	3401	48	36	2120	2310	38	12	616

About 5,450-lbs. of fish, 280-lbs. of game and a considerable amount of fruit were found to be unsound, and were destroyed.

ICE CREAM.

During the latter part of the year an inquiry was made into the conditions under which ice cream is prepared and stored in the borough. As a result of the investigations it became obvious that the standard of cleanliness and the sanitation of the surroundings under which the greater part of the material was made, cooled and stored, were such that ice cream was liable to be exposed to considerable risk of contamination. A serious outbreak of illness in an adjoining district appears to have been traced to the consumption of ice cream, a substance forming a suitable medium for the growth of micro-organisms. The attention of makers and dealers in the commodity has now been drawn to the provisions of a local act, whereby it is illegal to manufacture ice cream in insanitary surroundings. However, the only satisfactory solution seems to lie in the provision of a municipal ice cream factory, where for a small charge makers and dealers could prepare and store their stock of ice cream. The cost of such a building need not be prohibitive, and would tend to remove what is at the present time a source of danger to the health of the community.

FOOD POISONING.

On May 27th there were reported several cases of supposed food poisoning in the Parr District. On investigation it was found that several persons had taken ill with severe vomiting and diarrhœa, accompanied by a certain amount of collapse, soon after eating some corned beef, which had been purchased from a small shop in Parr. Eight families, consisting of 46 persons bought the meat from the same shop, but only 22 persons partook of it, 20 being taken ill; one death occurred. In one of the two cases where illness did not occur medical treatment was carried out within an hour, so that only one case can be definitely said to have eaten the meat without suffering any ill-effects. The illnesses commenced in most of the cases about two hours after the meat was eaten, but the interval varied from three-quarters of an hour in one case to five hours in another. The amount taken by each person varied considerably, and in one or two cases severe symptoms followed the ingestion of a very small portion. No other instances of similar illness are known to have occurred in the district.

On further investigation it was found that it was the custom in the district for small shopkeepers to buy tins of corned meat unopened, to open them at their own premises, and retail the meat in small portions.

This was done in the present case. The shop-keeper bought a 6-lb. tin early in the afternoon of the 26th May, and the tin was not opened until required by the first purchaser the same afternoon. The meat was then removed from its tin, and appeared quite normal. A part was sold at once to a purchaser, whose family was among the sufferers. The other families affected were supplied from the same piece of meat later in the day. The eight families affected were the only ones who were served with this meat.

The retail shop was inspected and found in a clean and tidy condition. No person serving in the shop had recently been attacked with diarrhœa.

A part of the meat suspected, and the tin which had contained it were secured for further examination. The tin appeared normal, there were no signs of it having been blown. The meat was apparently wholesome and in good condition. There was no discolouration or sign of putrefaction.

A bacteriological examination of a portion of the meat was carried out in the public health laboratory, but there was no evidence of any organisms likely to give rise to the illnesses which occurred.

Another portion of the meat was sent to the public analyst for chemical examination. He reported the presence of a trace of tin, copper and lead, but only in amounts rather less than ordinarily found in such food, and perfectly safe for human consumption.

Specimens of blood from several of the persons attacked were taken. These specimens were examined for reactions against micro-organisms usually associated with meat poisoning, and it was found that they reacted with certain of the organisms of the coli group. From this result it was concluded that the outbreak arose from infection by poison of an organism of this group.

Examination of material from the fatal case failed to show the presence of any pathogenic micro-organism.

Conclusions.

(1) From the fact that the corned meat was the one article consumed by all those who were taken ill, and that all those who partook of it, with one exception, were seized with similar symptoms, there can be no doubt that the corned meat was the cause of the illness.

(2) There was little possibility of any contamination of the corned meat after removal from the tin, the infection therefore was in the meat itself.

(3) The report of the chemical analysis showed that the outbreak was not due to any metallic poison likely to arise from the tin.

(4) The bacteriological examination of the meat was negative, and this was also the case of the bacteriological examination of certain organs from the child who died. The outbreak therefore, was not likely to be one of actual infection by germs.

(5) From the history of the epidemic, the time of onset, the nature of the symptoms occurring, and the examination of the blood of affected persons, the opinion was arrived at that the disease was caused by the ingestion with the meat, of certain toxins or ptomaines, formed in the meat previous to the process of cooking. The ptomaines were probably produced by the infection of the meat by some member of the group of germs known to cause such outbreaks. The ptomaines have a high heat resisting power, and may thus escape destruction during the process of cooking.

SALE OF FOOD AND DRUGS ACTS.

The following is an account of the work done under these Acts during the year. 167 samples of milk were taken. 60 were purchased informally and 107 with the formalities required by the Food and Drugs Acts ; of the former, one or 1·6 per cent. was reported to be adulterated or deficient in the constituents of normal milk, and of the latter 6 or 5·6 per cent.

Informal sampling is employed to discover, without arousing the suspicions of the seller, whether adulteration is being practised. Evidence is accumulating that this method of obtaining samples, if carefully carried out, is by far the best procedure foı the detection of offenders. The agent employed may be an ordinary customer, who therefore arouses no suspicion in the mind of the salesman. Should an informal sample prove to be adulterated, another sample can then be purchased with the usual formalities.

The following table shows the results of the analysis of the samples of milk.

Per Cent.	FAT. Under 2·7	2·8	2·9	3·0	3·1	3·2	3·3	3·4	3·5	Over 3·5	Total.
NON-FATTY SOLIDS. Under 8·1		1						2	1		4
8·2						1			1	2	4
8·3											
8·4							1				1
8·5							2	2		6	10
8·6			1	1	1		1	2		5	11
8·7				1	1	1			1	15	19
8·8				2	1		1	2	2	13	21
8·9			1		2	3	2	3	1	20	32
9·0		1		1	1	2	1		1	12	19
Over 9·0				1	3	3	3	5		31	46
Total...		2	2	6	9	10	11	16	7	104	167

The following details relate to the samples of milk certified not to be genuine :

1. A formal sample was 7 per cent. deficient in fat ; the seller was warned by the Committee.
2. A formal sample was 5 per cent. deficient in fat ; the seller was warned by the Committee.
3. An informal sample contained 8 per cent. added water, thereupon
4. 5. 6. 7. Four formal samples were taken in the course of delivery from the farm to the milk seller ; these formal samples contained from 6 to 18 per cent. of added water. The farmer was prosecuted and fined £5 and costs.

PRESERVATIVES IN MILK AND CREAM.

Under the Public Health (Milk and Cream) Regulations, 1912, no preservative substance may be added to milk intended for human consumption. Only cream containing 35 per cent. or over of fat may be preserved and then only by certain substances, the nature and amount of which

must be stated on a label. 167 samples of milk were examined for the presence of a preservative, none was found. Three samples of preserved cream were analysed, in each case the statement on the label was found to be correct, and the amount of milk fat was over 35 per cent. No instances of an infringement of the requirements as to labelling was detected. No thickening substance was found in the three samples of preserved cream examined. Practically no cream other than preserved cream is obtainable in the district.

OTHER FOODS.

Thirty-six informal samples and 34 formal samples were taken. Of the former, one, or 2·8 per cent proved to be adulterated, the latter were genuine.

The following particulars relate to the adulterated article:—An informal sample of chopped suet contained 25 per cent added flour. It was found impossible to obtain a formal sample—the seller was warned.

The following table shows the number of samples taken during the year and the number found to be not genuine.

NUMBER OF SAMPLES.

	Examined.	Adulterated		Examined.	Adulterated
Milk...	167	7	Sugar	2	—
Butter	31	—	Mustard	1	—
Cheese	—	—	Confectionery & Jam	—	—
Margarine	—	—	Pepper	2	—
Lard	4	—	Wine	—	—
Bread	—	—	Beer	5	—
Flour	1	—	Spirits	8	—
Tea	3	—	Drugs	—	—
Coffee	6	—	Other articles ...	7	1
Cocoa	—	—	TOTAL	237	8

HOUSING.

During 1913, a considerable amount of work has been done under the Housing and Town Planning Act, 1909, and under section 141 of the St. Helens Improvement Act of 1869. The scope of the work, however, has been largely restricted owing to a shortage of houses suitable for the working classes. There has been a natural disinclination to make closing orders, the effect of which would be to drive the occupiers into the

street. The following is a summary of action taken under the Housing and Town Planning Act :

Number of houses inspected for the purpose of section 17. ...	165
Number considered to be unfit for human habitation	149
Number of representations made to the Local Authority with a view to the making of closing orders	121
Number of closing orders made	74
Number of houses, the defects in which were remedied without the making of closing orders	15
Number of houses put into a fit state for habitation after the making of closing orders	27
Number of demolition orders made	2
Number of houses rendered fit for human habitation after the making of demolition orders	0
Number of houses demolished	22

The defects found comprised—general disrepair, insufficient ashplace and closet accommodation, insufficient drainage, insufficient pantry and wash-boiler accommodation, a common yard of insufficient area.

Nine plans and specifications of improvements were submitted to the Health Committee referring to 83 houses , of these seven were approved, dealing with 50 houses, and two were disapproved relating to 33 houses.

Demolition of Dwelling-Houses under the Housing and Town Planning, Act, 1909.

Twenty-four closing orders having remained operative for a period of 3 months, the question of the demolition of the dwelling-houses was taken into consideration. The owners were given one month's notice stating the time and place at which such demolition would be considered. Within the month, 16 houses were demolished by the owners, five were repaired and made habitable. The owners of the remaining three houses did not take the necessary steps to render the houses fit for human habitation, and orders were made for the demolition of the houses. One of these houses was afterwards demolished, and the remaining two demolitions orders having remained operative for a period of three months, steps were taken by the Local Authority for the demolition. Five houses against which demolition orders became operative in 1912, were demolished by the Local Authority, the cost of demolition was not covered by the sale of the materials, the Local Authority therefore took the necessary proceeeings and recovered £3.

Determination of Closing Orders under the Housing and Town Planning Act, 1909.

Twenty-four dwelling-houses having been rendered fit for human habitation, after closing ordess had been issued, the Local Authority determined the orders.

Appeals against Closing Orders.

The Local Authority issued closing orders against the dwelling-houses Nos. 74 and 76 Parr Street, and the owners appealed to the Local Government Board. After the preparation of evidence for the Board, the owners withdrew the appeal,and the property changed ownership.

The owners of the property known as Calico Square whose houses were closed after a Local Government Board Inquiry on the 15th October, 1912, carried out extensive alterations and repairs, and application was made for the determination of the closing orders. The Local Authority decided that the improvements, although carried out in a comprehensive manner as regards fifteen of the houses in question, did not meet the requirements of the bye laws. They therefore decided to take no further action in the matter, but determined the closing orders of the four houses, 17 to 21, Vernon Street.

Ruinous Buildings :—(St. Helens Corporation Act, 1911, Section 52(1)—

In accordance with the provisions of this Section, twelve unoccupied buildings were reported to the Health Committee for proceedings, of these three were demolished, two were repaired and made habitable, and seven remained to be dealt with at the end of the year.

OVERCROWDING.

A considerable amount of overcrowding exists in the borough. Efficient action to remedy the condition is rendered impossible by the scarcity of houses suitable for the working classes.

FACTORY AND WORKSHOPS ACTS.

FACTORIES.

The inspection of these is in the hands of a factory inspector appointed by the Home Office. Any act, neglect, or default which can be dealt with under the Public Health Acts is referred to the Local Authority. The following is a list of matters so referred during 1913, with one exception, the necessary alteration had been carried out at the end of the year.

No ventilated space between closet and workroom	5
Insufficient sanitary conveniences	7
Insufficient ventilation of washouse	1
Walls and ceilings requiring limewashing	4
Closet in unsatisfactory condition	1
Doors and inside fastening required to women's conveniences	2
No partitioning off males sanitary conveniences	1
Dirty and unsuitable sanitary convenience for women ...	1
No screen to sanitary conveniences	3
Drain in yard defective	1

WORKSHOPS.

The number of workshops registered is 312. These were visited on 468 occasions and as a result the following defects were discovered and in due course remedied.

Defective walls	3
Limewashing of walls and ceilings required	7
Want of proper sanitary conveniences	4
Insanitary water closet	2
Defective paving	3
Defective spouting	3
No ventilated space between water closet and workroom ...	1
Insufficient ventilation	1

WORKPLACES.

Eighteen workplaces are registered, the trades carried on being as follows :—

Plumber	1
Joiner, etc....	7
Wheelwright	3
Smithy	3
Masons	2
Cab Yard	2

BAKEHOUSES.

Reference to these will be found on page 20.

OUTWORKERS.

Occupiers of factories, workshops, or any place from which work of certain kinds is given out are compelled to keep a list of outworkers employed by them, and to send a copy of the list to the Local Authority on or before

the 1st February and August in each year. Eight lists referring to 38 persons were made out by employers during the year. Few of the lists were sent in by the required dates. The outworkers were visited on 35 occasions and the surroundings under which the work was being done were found to be on the whole satisfactory.

On pages 57, 58, and 59 will be found the returns annually required by the Home Office.

SANITARY ADMINISTRATION.

WORK CARRIED OUT BY THE VARIOUS MEMBERS OF THE STAFF.

The inspector of nuisances generally directs the work of the assistant inspectors, supervises the conversions of closets to the water carriage system, and is available for special investigations.

Of the five assistant inspectors of nuisances, three are district inspectors, one mainly devotes his time to work arising from the conversion scheme, and one is principally engaged in inspections under the Housing Acts.

The nurses are employed in visiting houses in which a birth has occurred, in the supervision of midwives, in the medical inspection of school children and in following up cases of defects. They also take part in the treatment of children at the school clinic and act as tuberculosis nurses.

CORPORATION HOSPITALS.

Peasley Cross Hospital.

The borough isolation hospital at Peasley Cross provides accommodation for 120 patients. Cases of scarlet fever, diphtheria, typhoid fever, erysipelas, puerperal fever, and when necessary other diseases are treated. During the year one pavilion was set apart for the admission of cases of pulmonary tuberculosis. The following tables show the number of patients treated in the institution during the year, and the duration of treatment.

ADMISSIONS, DISCHARGES AND DEATHS DURING 1913.

DISEASE.	Patients in hospital 1st Jan. 1913		Admitted.		Discharged.		Died.		Remaining in hospital on 1st Jan. 1914.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
Scarlet fever ..	28	40	284	324	278	325	10	15	23	25
Diphtheria ..	3	6	46	62	43	63	6	2	—	3
Enteric fever ..	3	1	18	13	14	11	6	2	1	1
Erysipelas ..	1	—	3	—	4	—	—	—	—	—
Puerperal fever	—	—	—	2	—	2	—	—	—	—
Other diseases ..	4	3	20	8	11	6	6	5	7	—
Phthisis	—	—	8	12	6	13	—	1	—	—
Totals ..	39	50	379	421	356	420	28	25	31	29
	89		800		776		53		60	

DISEASE.	Scarlet fever.	Diphtheria	Enteric fever.	Phthisis	Other Diseases	Total.
Total days	24271	2756	1250	10488	538	39203
Average duration in days per patient treated	35·9	23·5	35·7	138·0	20·7	42·1

OLD WHINT HOSPITAL.

The smallpox hospital is situated at Old Whint. Thirty-six patients can be isolated. Nineteen beds at this hospital have been used during the year for the treatment of consumption. The following tables give an analysis of the cases treated.

DISEASE.	Admitted		Discharged		Died	
	Males	Females	Males	Females	Males	Females
Small-pox	0	0	0	0	0	0
Observation cases	1	0	1	0	0	0
Phthisis	29	12	24	8	3	2

ECCLESTON HALL SANATORIUM.

During 1913 the Corporation bought about 20 acres of land surrounding Eccleston Hall, for the purpose of erecting a sanatorium for the treatment of cases of pulmonary tuberculosis. The mansion was converted into an administrative block to provide accommodation for a resident medical

officer, nursing and domestic staff. Two pavilions and three shelters were erected for the treatment of 56 patients. One pavilion was occupied at the end of the year by 19 cases transferred from the Old Whint hospital.

The proportion of notified cases of infectious disease treated in hospital is given below :—

	Percentage of notified cases treated in hospital, 1913.			
	1910.	1911.	1912.	1913.
Scarlet fever	85·9	81·4	85·6	82·8
Diphtheria	69·4	74·8	69·6	70·9
Enteric fever	87·8	94·0	93·0	100·0
Puerperal fever	100·0	18·1	50·0	50·0
Erysipelas	5·0	5·2	7·5	4·0
Phthisis	0·0	0·8	70·0	34·3
Other diseases	0·0	0·0	0·0	1·1

The total staff on duty at the end of December consisted of a matron, 5 sisters, 7 staff nurses, 14 probationers, 27 domestic servants, 3 porters and an errand boy.

DISINFECTING STATION.

The disinfection station is situated at the Peasley Cross hospital. Visits to 930 houses were made for the removal of clothing and bedding for disinfection by steam. The following is a list of the articles disinfected :—

Hospital clothing and bedding	5630
Blankets, sheets, and rugs	4625
Pillows and cushions	2910
Beds	965
Other articles of clothing	6320
Library books	416
Other articles	2440
Total ...	23306

Infected rooms are now sprayed with a solution of formalin and closed for four hours. 2,798 rooms were disinfected during the year.

AMBULANCE STATION.

A motor ambulance is kept at the Peasley Cross hospital, to convey patients to either of the Corporation hospitals. During the year, the total mileage was 6,028.

A considerable saving of time has been effected by the purchase of the ambulance, and in view of the ease and rapidity with which cases can now be removed to hospital, there would appear to be no reason why isolation hospitals should not be situated in more favourable surroundings outside a borough.

PUBLIC MORTUARY.

This is situated at the rear of the town hall and consists of a brick building containing two rooms.

Forty bodies have been placed in the mortuary during the year, and 17 post-mortem examinations conducted.

ADMINISTRATION OF LOCAL OR ADOPTIVE ACTS.

The borough is fortunate in possessing several valuable Local Acts :—

(1) St. Helens Improvement Act, 1869.
(2) St. Helens Corporation Act, 1889.
(3) St. Helens Corporation Act, 1893.
(4) St. Helens Corporation Act, 1898.
(5) St. Helens Corporation Act, 1911.

The following general Adoptive Acts are either wholly or in part in force in the district :—

(1) Infectious Diseases Prevention Act, 1890.
(2) Public Health Acts (Amendment) Act, 1890.
(3) Notification of Births Act, 1907.
(4) Public Health Acts (Amendment) Act, 1907.

Byelaws have been made with respect to :—

Nuisances.
Slaughter houses.
New streets and buildings.
Common lodging houses.
Houses let in lodgings.
Spitting.

Regulations are in force relating to dairies, cowsheds and milk shops, glanders or farcey, public abattoir, closing orders, general weekly half-holiday, etc.

CHEMICAL AND BACTERIOLOGICAL LABORATORY.

A well-equipped laboratory is provided at the town hall. A smaller laboratory has also been fitted up at the tuberculosis dispensary. Examination of material from suspected cases of disease is carried out free of cost at the request of a medical attendant. During the latter part of the year the Council decided to provide facilities for the diagnosis of cases of venereal disease, including the Wassermann reaction for syphilis.

The following table shows the number of specimens examined during the year :—

Specimens.	Number received	Results.	
		Positive	Negative
Diphtheria—swab	312	96	216
Typhoid fever—blood	70	14	56
Tuberculosis—sputum	300	76	224
Ringworm—hair	116	46	70
Other specimens	47	...	...
Total	845	232	566

Anti-toxins are provided free for persons suffering from diphtheria and other diseases. The total amount supplied during the year was 816,000 units, 720,000 being for cases of diphtheria.

PREVENTION AND CONTROL OVER ACUTE INFECTIOUS DISEASE.

NOTIFIABLE DISEASES.

Under the Infectious Diseases Notifications Acts, 1889 and 1899, and Regulations made under the powers conferred by the Public Health Act, 1875, the following diseases are compulsorily notifiable in the borough :—

Smallpox.
Cholera.
Diphtheria.
Membraneous croup.
Erysipelas.
Scarlet fever.
Typhoid fever.
Typhus fever.
Continued fever.
Relapsing fever.
Puerperal fever.
Cerebro-spinal fever.
Ophthalmia neonatorum.
Acute poliomyelitis.
and All forms of tuberculosis.

The means adopted in the borough to control the spread of infectious disease are briefly as follows :—

Immediately on the receipt of a notification a member of the staff is sent to visit the house in order to obtain full particulars concerning the source of infection, the health of the contacts and the sanitary conditions of the dwelling. Unless there is ample provision for home treatment the patient is removed to the isolation hospital. Cards giving instructions concerning the particular disease and setting out the steps to be taken with regard to disinfection, are left at the house. The infected room or rooms are sprayed with a solution of formalin and closed for four hours. A supply of suitable disinfectant is given, and in every case the bedding is removed for steam sterilisation. In cases where the patient is nursed at home frequent visits are made to see that the necessary precautions are taken, and as soon as the illness is over, disinfection is carried out. Cards of warning are sent to any laundry or library connected with the case and where school children are living in an infected house exclusion notices are forwarded to the school attendance department, the parents and head teachers. Further notices are sent out when the home is free from infection. Within about ten days from the date of discharge from the isolation hospital, a final visit is made to ascertain whether the patient still remains free from infection, and to inquire concerning the health of the other members of the family. Persons coming from a house where an infectious disease is being nursed are not permitted to engage in certain trades. Arrangements have been made whereby the local registrar of births and deaths at once notifies to the medical officer of health the occurrence of a death from an infectious disease. Table 26 shows the age and ward distribution of the cases notified of infectious disease.

Smallpox.

No instance of this infection was notified during the year. A suspected case was removed to the isolation hospital, but proved to be suffering from another disease. The following table shows the number of cases notified and the number of deaths occurring from smallpox in the borough since 1898.

Years.	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	—	—	—	—	4	27	34	1	—	—	—	—	1	—	—	—
Deaths ...	—	—	—	—	—	—	3	—	—	—	—	—	1	—	—	—
Death rate per 1,000 population	—	—	—	—	—	—	0·03	—	—	—	—	—	0·01	—	—	—

Although the town has been comparatively free from the disease for nearly ten years, it is to be feared that the increasing number of the population unprotected by vaccination will afford suitable material for an extensive epidemic. The following figures show the extent of vaccination in St. Helens since 1897 :—

VACCINATION RETURNS SINCE 1897.

YEAR.	1 Births.	2 Vaccinated.	3 Insusceptible.	4 Dead.	5 Con-Obje't'r	6 Post-poned.	7 Removed	8 Un-accounted	Percentage not Vaccinated including Columns 5, 6, 7, 8
1897	*3209	2680	11	390	4	7	110	7	4·9
1898	*3238	2696	15	383	14	1	103	15	4·6
1899	*3126	2625	32	346	10	3	94	16	4·8
1900	*3148	2654	10	367	5	12	82	18	4·2
1901	3157	2639	4	391	11	29	59	24	4·4
1902	3245	2788	4	342	7	12	58	34	3·8
1903	3391	2977	8	325	2	6	62	11	2·6
1904	3375	2940	7	341	10	10	42	25	2·8
1905	3259	2923	3	270	6	10	29	18	2·1
1906	3137	2733	5	318	8	12	39	22	2·8
1907	3185	2810	9	257	24	19	49	17	3·7
1908	3260	2858	18	248	70	11	35	20	4·5
1909	3103	2720	8	241	81	9	33	11	4·7
1910	3165	2731	3	255	131	3	23	19	6·0
1911	3229	2750	9	277	148	5	26	14	6·5
1912	3154	2646	4	249	216	12	23	4	8·7

*The above Returns are for St. Helens Sub-District of the Prescot Union, which does not include quite the whole of the Borough.

CHOLERA, TYPHUS FEVER, CEREBRO-SPINAL FEVER, ACUTE POLIOMYELITIS. COMBINED AND RELAPSING FEVERS.

There were no cases notified during the year, except one case of acute poliomyelitis subsequently withdrawn.

DIPHTHERIA AND MEMBRANEOUS CROUP.

During the year 148 cases with 15 deaths have been reported, giving an attack rate of 1·48 and a death rate of 0·15 per thousand of the population. The following tables set out the record for previous years :

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	60	64	77	85	93	126	169	181	190	199	211	175	121	131	135	148
Deaths....	16	15	19	33	20	23	22	18	22	11	17	12	7	8	19	15
Death rate 1,000 per population	0·18	0·17	0·21	0·38	0·23	0·26	0·24	0·20	0·24	0·12	0·18	0·12	0·07	0·08	0·19	0·15

The number of cases removed to hospital was 105, or 70·9 per cent. of the total cases notified. In 95·3 per cent. only one case occurred in a house, and in 4·7 per cent. two cases were reported. The following table gives a classification of the cases and the deaths according to the age of the patients.

Ages.	Under 1 year	1—5	5–15	15–25	25–45	45–65	65 & over.
Cases	7	40	75	16	7	3	0
Deaths	4	8	3	0	0	0	0

Erysipelas.

Seventy-five cases were notified and one death was stated to have taken place from the disease. Four per cent. were removed to the isolation hospitals. The following table gives a record of the notifications and deaths of former years.

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	173	121	138	106	109	61	73	108	100	84	86	102	100	115	93	75
Deaths ...	3	3	2	2	3	0	1	6	3	7	3	1	5	2	1	1

Scarlet Fever.

During the year, 723 notifications were received with 26 deaths.

The numbers for previous years are as follows :—

Years	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	385	335	580	719	1224	728	416	270	237	207	802	894	717	543	820	723
Deaths ...	24	8	25	29	52	26	17	16	4	10	29	33	22	13	19	26
Death-rate per 1,000 population	0·28	0·09	0·28	0·34	0·60	0·29	0·17	0·17	0·04	0·10	0·30	0·34	0·22	0·13	0·19	0·26

Although the origin and transmission of the disease are still somewhat obscure, there can be little doubt that efficient administration can do much to control the prevalence of scarlet fever. The disease at the present time throughout the country is generally of a mild type. It is probable that the main source of infection is direct personal contact with a person suffering from an unrecognised and sometimes apparently trivial attack of the disease. In its early stages scarlet fever is particular infectious. Later on in the illness discharges from the nose or ears are very liable to give rise to the disease. Experience has shown that persistent and regular inquiries made at the school attended by a patient not infrequently lead to the discovery of other children similarly affected.

In 74·1 per cent only one case occurred in a house. In 17·0 per cent. two cases arose in the same house, in 6·2 per cent three cases, and in 2·7 per cent more than three cases. The number of cases removed to hospital was 599, or 82·8 per cent. of those notified. The following table gives a classification of the cases of and deaths at various ages from scarlet fever during the year.

Ages.	Under 1 year	1–5	5–15	15–25	25–45	45–65	65 & over.
Cases	11	200	462	37	11	2	0
Deaths.....	0	14	12	0	0	0	0

Typhoid Fever.

Twenty-five cases with four deaths were notified during 1913. This is the least number ever recorded in the borough. All the cases notified were removed to hospital and it is probable that prompt and complete isolation of the patients had some influence in diminishing the prevalence of the disease. The following table gives the record for previous years :—

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	136	221	123	164	81	76	61	37	99	61	90	66	74	199	43	25
Deaths ...	30	43	19	34	25	18	13	2	18	12	12	13	10	22	8	4
Death-rate per 1,000 population	0.36	0.49	0.21	0.40	0.29	0.20	0.14	0.02	0.19	0.12	0.12	0.13	0.10	0.22	0.08	0.04

Puerperal Fever.

Four persons were reported to be suffering from puerperal fever during the year, no deaths were stated to be due to the disease. Two of the cases notified were removed to hospital. The following table gives the figures relating to the cases reported in previous years :—

Years.....	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	15	16	14	6	3	12	5	10	12	7	4	11	4	4
Deaths ...	9	7	4	0	1	5	3	2	1	2	0	4	2	0
Attack-rate per 1,000 births....	4·8	5·1	4·3	1·7	0·9	3·7	1·6	3·1	3·6	2·2	1·2	3·2	1·2	1·2

Ophthalmia Neonatorum.

Seven children were notified as suffering from this disease. The cases were treated at home, an inquiry into the after-history of the patients has shown that in one case total loss of sight occurred in one eye as a result of the disease.

NON-NOTIFIABLE DISEASES.

Measles.

The number of cases reported during the year was 1,999 with 189 deaths. The following table gives the record for previous years :

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	211	470	828	355	1245	30	2194	807	160	2123	39	1617	265	1411	614	1999
Deaths ...	17	21	59	7	59	1	131	41	10	141	—	188	15	69	62	189
Death rate per 1,000 population	0·20	0·24	0·66	0·07	0·68	0·01	1·47	0·45	0·10	1·56	0·0	1·97	0·15	0·71	0·63	1·90

The disease has been prevalent in St. Helens about every second year. A severe outbreak which began in 1912 and did not cease until the early part of the following year was the occasion of an inquiry by the Board of Education. Notifications are received chiefly from school teachers and school attendance officers. It is certain, however, that the extent of an epidemic is as yet imperfectly known. Tables 14 and 15 show the number of cases notified from the various schools each month during the year, and the age distribution of the cases.

It is probable that overcrowding and unfavourable home circumstances in many instances play an important part in the fatality from the disease. Measles rarely causes a death in children of the middle and upper classes. It is likely, however, that early removal to hospital of affected children coming from insanitary surroundings where efficient nursing is impossible, would do much to mitigate the seriousness of an epidemic. Although compulsory notification has not been as successful in combatting the disease as it was at one time, expected to be, it must be remembered that compulsory notification is of limited value unless associated with proper nursing facilities. It is to be hoped that in the near future accommodation will be provided for the treatment of the majority of the worst cases of measles. The following table shows the deaths at various ages during 1913.

Ages.	Under 1 year	1–2	2–5	5–15	15–25	25 and over.
Deaths	29	77	71	11	1	0
Death-rate per 1,000 of the population at these ages	10·9	30·5	9·3	0·49	0·05	—

WHOOPING COUGH.

One hundred and twenty-three cases with 18 deaths were notified. The only notifications received were those from school teachers and attendance officers. The following tables give a record of the extent of the disease in other years. The district has been comparatively free from whooping cough during the period under consideration.

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Deaths ...	34	41	56	17	18	30	49	26	5	52	7	62	16	39	46	18
Death-rate per 1,000 population	0·40	0·47	0·63	0·20	0·20	0·34	0·55	0·28	0·05	0·56	0·07	0·65	0·16	0·40	0·46	0·18

DIARRHŒA AND ENTERITIS.

According to a system adopted by the Registrar General, deaths from diarrhoea and enteritis are divided up as they occur in children under or above two years of age. A further sub-division is made into infective and non-infective varieties of the diseases. The Local Government Board, on the other hand, requires a return of all deaths from diarrhoea and enteritis irrespective of the age of the deceased. During 1913, 120 deaths were attributed to diarrhoea or enteritis, and of these 106 occurred in children under two years being a death-rate from these diseases of 33 per 1,000 births. The following table shows the deaths at certain age periods from both diseases.

Ages.	Under 1 year	1–2	2–5	5–15	15–25	25–45	45–65	65 and upw'ds
Deaths....	72	34	9	2	0	0	2	1

The figures for other years are :—

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Deaths....	140	114	91	97	50	53	120	66	105	36	59	27	50	228	49	120
Death-rate per 1,000 population	1·65	1·31	1·02	1·14	0·58	0·60	1·35	0·73	1·15	0·39	0·62	0·28	0·51	2·30	0·50	1·20

PREVENTION AND CONTROL OVER TUBERCULOSIS.

A systematic campaign against tuberculosis has been carried on in St. Helens since about the year 1899, when arrangements were made with medical practitioners for the voluntary notification of pulmonary tuberculosis. In 1906 the Committee decided that accommodation should be provided in a ward at the isolation hospital at Peasley Cross for certain

cases of the disease. In 1912 the smallpox hospital at Old Whint was adapted for the reception and treatment of a further number of patients. In the preceding year, St. Helens obtained in a private Act, power to remove to hospital persons suffering from consumption, who were living under home conditions such that due precautions could not be taken to prevent the spread of infection. Although proceedings under this section have been instituted only in one instance, the powers conferred have on many occasions been found to be very valuable.

During 1913, the Corporation adapted and equipped two houses in Claughton Street for use as a school clinic and tuberculosis dispensary. A site of about twenty acres on the western extremity of the borough was purchased, and two pavilions were erected to accommodate fifty patients, twenty in wards of ten beds each, and thirty in cubicles containing one or two beds, the existing residence being converted into an administrative block. Three shelters of a permanent description are being erected in the grounds to accommodate six persons.

Pulmonary Tuberculosis.

During the year 253 primary notifications were received, and 100 deaths from the disease were recorded. The following table shows the number of notifications of pulmonary tuberculosis received each year since 1900, and also the number of deaths stated to be due to the disease.

Years.....	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Cases	66	54	80	66	85	71	126	106	92	78	55	113	130	253
Deaths ...	146	114	143	127	140	118	131	101	113	98	91	99	91	100
Death-rate per 1,000 population	1·65	1·34	1·66	1·45	1·58	1·31	1·43	1·10	1·20	1·02	0·94	1·03	0·92	1·00

The following is a division into age and sex groups of the primary notifications received :—

	0–1	1–5	5–15	15–25	25–35	35–45	45–55	55–65	65 up.
Males	0	4	29	22	38	25	17	8	4
Females	0	3	29	23	24	11	14	2	0
Totals...	0	7	58	45	62	36	31	10	4

Thirty deaths due to pulmonary tuberculosis occurred in persons concerning whom no notification had been received, and in a considerable

number of cases the notifications were made within a short period before death. The interval between the time of notification and of death is shown by the following figures :—

	Weeks.								Months.									
Interval.	Under 1	1–2	2–3	3–4	4–5	5–6	6–7	7–8	2–3	3–4	4–5	5–6	6–7	7–8	8–9	9–10	10–11	11–12
Number of Cases	7	4	5	8	1	3	4	3	9	4	4	3	1	2	0	2	3	2

A classification of the approximate rental of the houses where the persons affected were residing at the time of notification is given below. It will be seen that practically all the notified cases of the disease are presumably in persons of the working classes. Although pulmonary tuberculosis may be more common amongst this section of the population, the figures must certainly not be taken to indicate that no instances of the disease occur in the middle and upper classes. The only explanation can be that cases in the latter are not being notified. Table 16 shows the ward incidence of the notifications and of the deaths since 1901.

Under 5/– Per week	5/– to 6/- Per week.	Over 6/- & under 8/– per week	Resident in Instituti'ns	Total.
66	134	19	34	253

The steps which are taken to prevent the spread of the disease are as follows :—On the receipt of a notification the patient is visited by a nurse, who instructs him concerning the infectious nature of the illness, particularly with regard to the disposal of expectoration, and the value of fresh air and suitable sleeping accommodation. Arrangements are made so that the patient can attend the tuberculosis dispensary for examination and treatment. If he is too ill to leave his home, the patient is visited by the tuberculosis officer. In either case steps are taken to give sanatorium or hospital treatment for at least three months. This period is extended in suitable cases. On discharge from hospital the patient commences a regular attendance at the dispensary. Disinfection is carried out soon after the first visit, on removal of the patient to sanatorium, at the termination of the illness and from time to time during the progress

of the case. During 1913 the Local Authority obtained the use of five beds for the treatment of early cases at Belbroughton Sanatorium. There has been a cordial co-operation between the local Insurance Committee and the Sanitary Authority in dealing with persons suffering from pulmonary tuberculosis. The work carried out by the former is described in detail on page 55.

Other Forms of Tuberculosis.

The notification of all forms of tuberculosis became compulsory in 1913, and as a result, 164 notifications have been received. 90 deaths have been recorded. The following table shows the number of deaths attributed to forms of tuberculosis other than pulmonary since 1898. Up to the present hospital accommodation has not been generally provided by the Local Authority for instances of non-pulmonary tuberculosis.

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Deaths ...	50	48	50	44	55	44	51	54	77	76	78	70	61	64	65	90
Death-rate per 1,000 population	0·61	0·58	0·60	0·52	0·63	0·51	0·58	0·60	0·84	0·82	0·83	0·73	0·63	0·66	0·66	0·90

The following table gives the age and sex distribution of the notifications received. Steps similar to those previously detailed are taken to follow up and prevent the spread of infection.

Ages.	Under 1 year	1–5	5–15	15–25	25–35	35–45	45–55	55–65	Over 65	Total
Males	7	27	38	12	6	..	..	..	..	90
Females	3	18	39	10	4	..	..	..	..	74
Total	10	45	77	22	10	..	..	..	..	164

SANATORIUM AND HOSPITAL TREATMENT.

Eighty-seven patients were admitted into Bellbroughton, Peasley Cross, or Old Whint hospitals for periods varying from three to six months. Of these, 29 showed considerable improvement on discharge, 21 some improvement, 9 little or no improvement, 14 deaths took place in the institutions, the remainder of the cases are still under treatment.

TUBERCULOSIS DISPENSARY.

The dispensary which previously had been carried on in rooms at the town hall was removed in Oct. 1913, to new and well-equipped premises in

Claughton Street—the following is a record of the work done during the year.

	Pulmonary	Other forms.
Number of old cases attending on 31st Dec., 1912 ...	50	1
Number of new cases during the year 1913 ...	158	21
Number of attendances during the year ...	1197	53

AGE AND SEX CLASSIFICATION OF NEW CASES.

	Pulmonary.		Other Forms.		Totals.	
	Males.	Females	Males.	Females	Males	Females
1–5.....	—	—	—	—	—	—
5–15.....	24	17	7	10	31	27
15–25.....	20	15	—	—	20	15
25–35.....	32	15	4	—	36	15
35–45.....	19	7	—	—	26	7
45–55.....	7	—	—	—	7	—
55–65.....	1	—	—	—	1	—
65 upwards	1	—	—	—	1	—
Totals.....	104	54	11	10	115	64

The nurses made 417 first-visits and 599 re-visits to notified cases and as a result of inquiries into the possible sources of infection, it was found that in 38 per cent. of the cases a definite history could be obtained of close association with a person known to have been suffering from the disease.

INVESTIGATION OF OTHER DISEASES.

Cancer and Malignant Disease.

Seventy-three deaths during 1913, were stated to be due to cancer and malignant disease, this is the largest number recorded in the borough.

The following table shows the figures for previous years :—

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Deaths ...	44	35	46	31	35	37	42	38	38	56	56	44	63	62	58	73
Death-rate per 1,000 population	0·54	0·42	0·55	0·36	0·40	0·42	0·47	0·42	0·42	0·60	0·59	0·46	0·65	0·64	0·59	0·73

Until the cause of the disease is known, any steps directed towards prevention will be somewhat uncertain. In view of the possibility that the disease may be due to a micro-organism, disinfection is always carried out at a house where death occurs. Although many substances have been used for the cure of the complaint, early and complete removal by a surgeon

still affords the best chance of success. It cannot be too widely known that prompt and thorough removal of the growth will, in the majority of cases, prove successful in effecting a cure.

PULMONARY DISEASES OTHER THAN TUBERCULOSIS.

Three hundred and eighty-four deaths were certified to be due to respiratory diseases other than tuberculosis. The number of deaths from these diseases in previous years is shown in the following table :—

Years.....	1898	1899	1890	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Deaths ...	332	379	439	326	402	364	370	326	284	372	295	349	256	343	331	384
Death-rate per 1,000 population	3·91	4·37	4·96	3·84	4·67	4·16	4·16	3·62	3·11	4·02	3·14	3·63	2·65	3·55	3·37	3·86

Chart 18 sets out the prevalence of certain winds and the number of deaths occurring from these diseases.

DEATHS FROM VIOLENCE.

The number of deaths which took place from violence was 60· Seventy-seven inquests were held and 17 post-mortem examinations carried out.

UNCERTIFIED CAUSES OF DEATH.

In 59 instances a death was registered without being certified by a medical practitioner or coroner. The alleged causes of these deaths were as follows :—Premature birth, 13 ; Convulsions, 10 ; Heart-failure, 8 ; Heart-disease, 6 ; Apoplexy, 4 ; Bronchitis, 4 ; Epilepsy, 4 ; Senile decay, 3 ; Pneumonia, 2 ; Debility, 2 ; Teething, 1 ; Influenza, 1 ; Diarrhœa, 1.

The existing law relating to the registration of births and deaths is most unsatisfactory.

MEANS FOR PREVENTING MORTALITY IN CHILDBIRTH AND INFANCY.

MIDWIVES ACT.

At the close of 1913, 47 women gave notices of their intention to practice within the borough during the ensuing year. The qualifications of these women were as follows :—

Central Midwives Board examination certificate	11
Other recognised certificate	18
Untrained	18
	47

Of the total births occurring in the borough during the year, 98·8 per cent. were attended by midwives. No instance was discovered of a birth being attended by an uncertified midwife. The extent of the practices of the women vary considerably, one having attended 260 births while another only had one case.

The following table shows the work carried out by the midwives during 1913, and gives a record for previous years.

Year.	Number of cases attended. Trained midwives.	Untrained midwives.	Total.
1906	1520	1294	2814
1907	1739	1245	2984
1908	1778	1368	3146
1909	1789	1293	3082
1910	1908	1152	3060
1911	2009	1185	3194
1912	2153	1061	3214
1913	2296	983	3279

STILLBIRTHS.

The number of stillbirths notified by midwives during the year was 149, which is at the rate of 4·59 per cent of the births attended. The following table shows the numbers notified each year since the adoption of the Notification of Births Act, and also the number buried in the cemeteries. The significance of the discrepancy is obvious.

Years	1906	1907	1908	1909	1910	1911	1912	1913
Number of still-births notified	119	107	111	123	87	95	95	149
Number buried in cemeteries	127	131	125	129	138	101	116	144

The prevalence of stillbirths in the practice of midwives shows much variation, the highest rate being 7 per cent. and the lowest one per cent. The months of pregnancy during which the stillbirths took place were stated to be as follows :—

6th month	14
7th month	44
8th month	32
9th month	59
	149 cases.

MEDICAL ASSISTANCE.

Under rules issued by the Central Midwives Board, a midwife must advise that medical assistance shall be obtained in any case where abnormal conditions occur during the confinement or in the lying-in period. The conditions for which medical assistance was required were as follows :—

Abnormal presentation	85
Deformed pelvis	10
Ante-partum hæmorrhage	24
Post–partum hæmorrhage	16
Retained placenta	30
Ruptured perinæum	40
Premature birth	99
Fever	5
Uterine inertia	145
Other causes	209
	663

Under the National Insurance Act, the sum of 30/– is provided in respect of the confinement of the wife of an insured person and where a married woman is herself insured she is entitled to an additional benefit, there is also a sickness allowance of 7/6 a week, but it is stipulated that a woman shall not return to remunerative work within four weeks after confinement. This maternity benefit has already proved of great assistance in providing for the necessary medical aid, clothing, and food.

PUERPERAL FEVER, OPHTHALMIA NEONATORUM.

Particulars relating to these diseases are given on page 40.

NOTIFICATION OF BIRTHS ACT.

This Act came into force in St. Helens in 1908. Four years later the Council resolved to pay a fee of 6d. for each birth notified by medical practitioners or midwives. Under the Act a notice in writing has to be sent to the medical officer of health within thirty-six hours of birth. Notification forms are supplied addressed and stamped for use. During the year all the births occurring in the borough were notified, 96·6 per cent. by midwives, 3·1 per cent. by doctors, and the remainder by a parent of the child. With very few exceptions each birth is visited as early as possible, and generally within seven days of the occurrence by a trained nurse who is also a certified midwife. The visits are well received, suitable instructions are given concerning the care and feeding of the infant and advantage is taken of the visit to note any sanitary defect in the house. Unless the home circumstances appear to be favourable and the health and general condition of the child satisfactory, a further visit is paid in about a month ;

unsatisfactory cases receive almost constant supervision. The number of visits made by the nurses during the year was 4,620. A high percentage (99%) of infants were breast-fed at the time of the first visit, but there is reason to believe that in a proportion of the cases breast feeding is discontinued within a short period.

INFANT MORTALITY.

During the year there were no less than 497 deaths of infants under one year of age, giving a mortality of 155 per thousand births. Diagram 17 shows the infant death-rate in St. Helens since 1873, and also figures for England and Wales. A study of table 18 shows that 22·5 per cent. of the deaths were ascribed to premature birth. There can be little doubt that this occurrence depends largely on the health of the mother, which in its turn is intimately associated with the economic and sanitary circumstances of the home and the conditions of occupation of married women. Amongst county boroughs and boroughs having a population exceeding 50 000. St. Helens has the highest death-rate of infants from premature birth. Debility as a cause of death was responsible for 9·4 per cent of the cases. Diarrhœa and enteritis was given as the cause of 14·4 per cent. of the deaths, pneumonia and bronchitis 16·9 per cent., and convulsions, a convenient word covering a multitude of diseases, 8 per cent. Of the total deaths, 100, or 20·1 per cent. occurred within 28 days from birth. It is safe to assume that the majority of these was due to what is known as ante-natal causes, closely related to the physique and home circumstances of the mothers. The time is approaching when sanitary authorities will have to make a determined attempt to deal with this part of the problem. The infantile death rate of legitimate children was 147 per thousand births, while that of illegitimate children was 395. These figures are significant of the unfavourable position of the latter.

The extent of infant mortality in the various wards is given below.

	Number of deaths.	Death-rate per 1,000 births.
North Eccleston	76	175
South Eccleston	62	124
Central	40	229
North Windle	45	134
South Windle	32	146
Hardshaw	59	142
East Sutton	55	140
West Sutton	51	219
Parr	77	152

CORPORATION MILK DEPOT.

This depöt, which was the first to be established in England, was opened in 1899. The number of children supplied with milk during 1913 was 85. Of this number 9 have died, the causes of death being certified as follows :—

Pneumonia, 4 ; Convulsions, 2 ; Marasmus, 1 ; Teething, 1 ; Bronchitis, 1.

VITAL STATISTICS.

Table 19 gives certain vital statistics relating to the borough since the year 1908 and in table 20 other important figures are shown. The diagram on table 24 illustrates the natural increase of the population—the excess of births over deaths.

BIRTHS.

The number of births registered during 1913 was 3,177 ; twenty-two occurring in other districts were transferable to St. Helens, making a total of 3,199. The birth-rate for the year was 32·16, a slightly higher rate than that of the previous year. The chart on table 21 shows that an alarming decline has occurred in the birth-rate for St. Helens since 1873, the rate for St. Helens however, is still above that for the rest of the country. A declining birth-rate is general, and is to be found in most civilised countries. Unless a remedy can be discovered, more strenuous efforts must be made to check the present waste of infant life. The following table gives the birth-rate in the various wards of the town.

Wards.	Number of births.	Birth-rate per 1,000.
North Eccleston	433	34·1
South Eccleston.	497	39·1
Central	174	28·7
North Windle	335	27·1
South Windle	218	26·3
Hardshaw	413	35·2
East Sutton	391	31·7
West Sutton	232	21·7
Parr	506	39·6

STILLBIRTHS.

Reference to these is made on page 48.

ILLEGITIMATE BIRTHS.

There were 96 illegitimate births registered, being 0·96 per thousand of the population. The following table shows the proportion of illegitimate births during past years.

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Number of illegitimate births	90	69	67	76	75	76	76	68	70	87	80	84	71	108	84	96
Proportion per 1,000 population	1·11	0·83	0·80	0·90	0·87	0·86	0·85	0·75	0·76	0·94	0·85	0·88	0·73	1·11	0·85	0·96

MARRIAGES.

The number of marriages during the year has been 730, giving a marriage rate (persons married) of 14·6 per thousand of the population. The following table shows the rate for past years.

Years.....	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
Number of Marriages..	602	563	576	591	578	569	576	529	544	632	579	608	637	617	691	730
Marriage Rate per 1,000 population..	14·20	13·00	13·00	13·94	11·42	13·02	12·98	11·76	11·93	13·6	12·3	12·7	13·1	12·7	14·09	14·6

DEATHS.

The total number of deaths registered as having taken place within the borough during the year is 1811. Of these 107 were deaths in St. Helens of persons usually resident in other parts; and were transferred by the Registrar General to the districts to which they belonged. 182 deaths of persons usually living within the borough occurred in other places, giving a total of 1886 as the actual number of deaths to be accepted in estimating the death-rate for the year, and a recorded death-rate of 18·96 per thousand of the population.* A recorded death-rate is, on the whole, a trustworthy test of the health of a large population. For comparing one district with another, however, it may lead to fallacies, because no account is taken of the age and sex distribution of the two localities. A high proportion of old persons naturally raises the recorded death-rate of an area. In order to allow for the varying constitution as to age and sex of the population of different towns, the Registrar General issues a factor of correction for each area, and when the recorded death-rate is multiplied by this factor, a corrected death-rate is obtained. The chart on table 22 shows the recorded death-rate in St. Helens since 1873, and in table 23 are given vital statistics relating to St. Helens and other large towns.

*The corrected death-rate is 20·44.

The death-rates in the different wards for 1913 are set out below :—

Wards.	Number of deaths	Death rate per 1000
North Eccleston	271	22·2
South Eccleston	214	16·8
Central	183	30·2
North Windle	192	15·5
South Windle	155	18·7
Hardshaw	220	18·8
East Sutton	195	15·8
West Sutton	191	17·9
Parr	265	20·7

Figures relating to the causes of and ages at death during the year are given in table 25.

AN ACCOUNT OF OTHER WORK.

In addition to the usual fortnightly statements of births, deaths, and infectious disease, special reports have been made to the Committee during the year by the medical officer of health. These have related to Common yards, Common Lodging Houses; Houses let-in lodgings; Housing of the Working Classes; Arrangements for Administration of Sanatorium benefit; Estimate of Cost of Eccleston Hall Sanatorium; High Death-Rate; Outbreak of Measles; Prevention of Measles; Enquiry into Epidemics of Measles; Tuberculosis (Animals) Order, 1913—Slaughter of Cattle; and Housing.

SHOPS ACTS, 1912 and 1913.

CLOSING ORDERS—(Barbers and Cycle Dealers).

The closing orders with respect to these trades are as follows :—

BARBERS	CYCLE DEALERS	
	From the 15th day of February to the 30th day of September (both inclusive).	From the 1st day of October to the 14th day of February (both inclusive).
Monday ..... 8–0 p.m.	..... 9–0 p.m.	..... 8–0 p.m.
Tuesday ..... 8–0 p.m.	..... 8–0 p.m.	..... 7–0 p.m.
Wednesday ..... 8–0 p.m.	..... 8–0 p.m.	..... 7–0 p.m.
Thursday (Weekly Half Holiday) 1–0 p.m.	..... 1–0 p.m.	..... 1–0 p.m.
Friday ..... 9–0 p.m.	.....10–0 p.m.	..... 9–0 p.m.
Saturday .....10–0 p.m.	.....10-30p.m.	..... 9–30 p.m.
Sunday ..... 7–0 p.m.	.....	.....

MAGISTERIAL PROCEEDINGS —1913 :—

DATE.	OFFENCE.	FINE.
2nd April	No meal hours, or half-holiday for assistant, and no notice stating the half-holiday fixed	2/6 and 6/6 costs
23rd October	Selling eggs and cheese at 7 p.m.	2/6 and 6/6 costs.
13th November	Selling tea at 4 p.m.....	5/- and 5/6 costs.

No difficulties were experienced during the year in carrying out the provisions of the Act, and although more offences occurred, the Committee only decided to prosecute in three instances. These prosecutions had the desired effect, and brought about in the town, stricter compliance with the Act.

No applications were made during the year for an extension of the weekly Half-holiday order or for Closing orders.

The weekly Half-holiday orders at present in force in the borough are as follows :—

> " The week day in every week on which the shops in the Borough of St. Helens in which the retail trades or businesses mentioned in the first schedule hereto are carried on, are to be closed for the serving of customers not later than one o'clock in the afternoon, shall be Thursday ; Provided that Saturday may be substituted for Thursday as respects any shop in which notice to that effect is affixed by the occupier."
>
> " The week day in every week on which the Shops in the Borough of St. Helens in which the retail trades or businesses mentioned in the second schedule hereto are carried on, are to be closed for the serving of customers not later than one o'clock in the afternoon shall be Saturday ; Provided that Thursday may be substituted for Saturday as respects any shop in which notice to that effect is affixed by the occupier."

The first schedule comprises, with one known exception, every trade not exempted by the second schedule of the Shops Act, 1912. The exception being that meat which has been treated so as not to be of a perishable nature has not been mentioned in the schedule, and this allows shop-keepers to chose their own weekly half-holiday with respect to meat of this class.

The second schedule comprises builders, plumbers, etc., saddlers and scales and weights dealers.

A weekly Half-Holiday extension order is in force for butchers and chemists as follows :—

> (a) " The provisions of Section 4 of the Shops Act, 1912, are hereby extended to shops in which the following retail trades or businesses are carried on, viz. :—
>
> The sale of Meat.
>
> The sale of medicines and medical and surgical appliances.
>
> (b) The week day in every week on which the shops in the Borough of St. Helens mentioned in Sub-section (a) of this article, are to be closed for the serving of customers not later than one o'clock in the afternoon shall be as follows :—
>
> " Shops in the East Sutton Ward of the said Borough in which the retail trade or business of the sale of meat is carried on — MONDAY.
>
> " Shops in the Borough other than the East Sutton Ward in which

the retail trade or business of the sale of meat is carried on THURSDAY.
" Shops in which the retail trade or business of the sale of medicines and medical surgical appliances is carried on THURSDAY.
Provided that Saturday may be substituted for Monday or for Thursday as the case may be as respects any Shop in which notice to that effect is affixed by the occupier.

VENEREAL DISEASE.

Without compulsory notification it is impossible accurately to gauge the prevalence of venereal disease in the borough. Although few deaths were certified as due to syphilis or gonorrhœa, it must not be supposed that these diseases rarely brought about a fatal result. A careful inquiry into the deaths which took place during the year shows that at least 20 deaths could be referred to the immediate or remote effects of venereal disease. That the diseases included under the term " venereal " are wide-spread and vitally important to the health of the community cannot be denied, but owing to the method by which they are usually spread there is a natural disinclination to deal with the subject in a thorough and comprehensive manner. In the opinion of those best capable to come to a conclusion, the time has arrived when municipalities should undertake a systematic campaign against these diseases, and it is to be hoped that the deliberations of a Royal Commission which is now sitting will initiate suitable measures for prevention and cure. The table 25 gives the analysis of the deaths in the borough during 1913 attributable to venereal disease.

NATIONAL INSURANCE ACT, 1911.

This Act, intending to provide for insurance against loss of health and for the prevention and cure of sickness came into force on the 15th July, 1912. The medical benefits conferred by the Act, however, did not come into operation until 12th January, 1913. As a measure likely to improve public health throughout the country, the National Insurance Act can probably be compared in its wide-spread utility to the Public Health Act, 1875.

Persons suffering from pulmonary tuberculosis are entitled to sanatorium benefit and local insurance committees are empowered to make arrangements for the treatment of the insured persons and their dependents in institutions approved by the Local Government Board and in other ways.

The Insurance Committee in St. Helens entered into the work with a broad-minded appreciation of their duties, and have co-operated in a cordial manner with the local Sanitary Authority. A Consultative Committee was formed from members of both bodies and the medical officer of health has acted as medical adviser to the Insurance Committee. Arrangements have been made between the two bodies whereby the Health Committee in return for a lump sum, undertake to provide treatment for every

person suffering from tuberculosis, including insured persons and their dependents.

During 1913, fifty-four applications to the Insurance Committee for sanatorium benefit were received, 51 from insured persons, and 3 from dependents. These cases were dealt with in the following manner, 15 were sent to Bromsgrove Sanatorium and 32 to the Borough Sanatorium or Old Whint Hospitals, on discharge from an institution dispensary treatment was carried out. Two cases received dispensary treatment only, two died before any action could be taken ; two applications were refused and one is outstanding.

PLANS.

Plans deposited and approved by the Health Committee.

	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913
For Dwelling-houses	353	509	299	206	128	139	143	199	305	212
,, Other buildings	21	17	25	18	8	17	29	14	27	13
,, Alterations to existing buildings	85	43	43	34	34	45	20	31	29	30
Total.....	459	569	367	258	170	201	192	244	361	255

The following table shows the several wards of the borough in which dwelling houses have been erected during the years mentioned :—

Year.	Eccleston North	Eccleston South	Central	Windle North	Windle South	Hardshaw	Sutton East	Sutton West	Parr	Total
1904	105	53	7	37	18	47	59	1	70	395
1905	19	93	1	44	16	90	42	10	54	366
1906	11	51	—	31	13	31	73	24	39	260
1907	22	38	—	26	—	22	77	3	29	219
1908	2	52	—	4	2	27	22	—	20	127
1909	—	36	—	10	—	10	6	3	10	75
1910	2	31	—	10	—	24	18	—	25	110
1911	14	20	--	—	—	30	75	26	12	177
1912	35	28	—	4	—	26	28	58	1	180
1913	10	31	—	—	3	19	14	99	6	182

STREETS.

Sewering and Draining.

Derbyshire Hill Road from Newton Road to No. 233, and from No. 295 to the Borough Boundary.

Levelling and Flagging Footpath.

Robins Lane from Oxley Street to Seymour Street, and from Waterdale Crescent to Smith Street.

HOME OFFICE TABLES.

FACTORIES, WORKSHOPS, LAUNDRIES, WORKPLACES, and HOMEWORK.

1.—INSPECTION.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... (Including Factory Laundries.)	36	16	—
Workshops ... ... (Including Workshop Laundries.)	468	24	—
Workplaces	18	4	—
Total	522	44	—

2.—DEFECTS FOUND.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
*Nuisances under the Public Health Acts :—**				
Want of cleanliness	6	6	—	—
Want of ventilation	4	3‡	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	1	1	—	—
Other nuisances	7	7	—	—
Sanitary accommodation. insufficient	6	5‡	—	—
Sanitary accommodation. unsuitable or defective..	12	11‡	—	—
Sanitary accommodation. not separate for sexes ..	3	2‡	—	—
Offences under the Factory & Workshop Acts :				
Illegal occupation of underground bakehouses (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouse (ss. 97 to 100).	2	2	—	—
Other offences	3	3	—	—
Total	44	40	—	—

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

‡ Time not expired.

3.—HOME WORK.

Nature of Work.*	OUTWORKERS' LISTS, SECTION 107.						
	Lists received from Employers						Notices served on Occupiers as to keeping or sending lists.
	Sending twice in the year.			Sending once in the year.			
	Lists †	Outworkers †		Lists	Outworkers		
		Contractors.	Workmen		Contractors.	Workmen	
1	2	3	4	5	6	7	8
Wearing Apparel—							
Making, etc.	14	—	34	1	4	1	8
Cleaning and washing	—	—	—	—	—	—	..
Household linen	..	—	—	—	—	—	—
Lace, lace curtains and nets	—	—	—	—	—	—	—
Curtains and furniture hangings	—	—	—	—	—	—	—
Furniture and upholstery..	—	—	—	—	—	—	—
Electro-plate	—	—	—	—	—	—	—
File making	—	—	—	—	—	—	—
Brass and brass articles ..	—	—	—	—	—	—	—
Fur pulling	—	—	—	—	—	—	—
Cables and chains ..	—	—	—	—	—	—	—
Anchors and grapnels ..	—	—	—	—	—	—	—
Cart gear	—	—	—	—	—	—	—
Locks, latches and keys..	—	—	—	—	—	—	—
Umbrellas, etc.	—	—	—	—	—	—	—
Artificial flowers	—	—	—	—	—	—	—
Nets, other than wire nets..	—	—	—	—	—	—	—
Tents	—	—	—	—	—	—	—
Sacks	—	—	—	—	—	—	—
Racquet and tennis balls	—	—	—	—	—	—	—
Paper, etc., boxes, paper bags	—	—	—	—	—	—	—
Brush making	—	—	—	—	—	—	—
Pea picking	—	—	—	—	—	—	—
Feather sorting	—	—	—	—	—	—	—
Carding, etc. of buttons etc	—	—	—	—	—	—	—
Stuffed toys	—	—	—	—	—	—	
Basket making	—	—	—	—	—	—	—
Chocolates and sweetmeats	—	—	—	—	—	—	—
Cosaques, Christmas crackers, Christmas Stockings etc.	—	—	—	—	—	—	—
Textile weaving	—	—	—	—	—	—	—
TOTAL ..	14	—	34	1	4	1	8

* If an occupier gives out work of more than one of the classes specified in column 1, and subdivides his list in such a way as to show the number of workers in each class of work, the list should be included among those in column 2 (or 5 as the case may be) against the principal class *only*, but the outworkers should be assigned in columns 3 and 4 (or 6 and 7) into their respective classes. A footnote should be added to show that this has been done.

† The figures required in columns 2, 3 and 4 are the *total* number of the lists received from those employers who comply strictly with the statutory duty of sending *two* lists each year and of the entries of names of outworkers in those lists. The entries in column 2 must necessarily be *even* numbers, as there will be two lists for each employer—in some previous returns odd numbers have been inserted. The figure in columns 3 and 4 will usually be (approximately) double of the number of individual outworkers whose names are given, since in the February and August lists of the same employer the same outworker's name will often be repeated.

4.—REGISTERED WORKSHOPS.

Important classes of workshops, such as workshop bakehouses may be enumerated here.

Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)
Dressmakers and mantle making	50
Milliners	22
Tailors	13
Hosiery Knitters	8
Joiners, builders, cabinet-makers and plumbers, etc. ..	17
Blacksmiths, wheelwrights, coach builders and masons ..	10
Weighing machine repairers	2
Cloggers and boot repairers	52
Cycle makers	2
Cooper	1
Tripe Dresser	2
Herbal Brewer	2
Pearl Ash Manufacturer	1
Seltzogene, charge maker	1
Tea wrapping	1
Drysalter	1
Leadlight maker	2
Cab washing	2
Saddler	1
Knackers Yard	1
Sundries	8
Total number of Workshops on Register	199

5.—OTHER MATTERS.

Class. 1		Number. 2
Matters notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Acts (S. 133, 1901)		
Action taken in matters referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory and Workshops Acts Acts (S. 5, 1901)	Notified by H.M. Inspector..	26
	Reports of Action taken sent to H.M. Inspector.	25
		10
Other		
Underground Bakehouses (S. 101) :—		
Certificates granted during the year		—
In use at the end of the year		1

TABLE 1

WARD.	Population.	Area in acres.	Approximate Acreage unbuilt on.	Persons per Acre built upon.
North Eccleston	12670	235.439	135	126.1
South Eccleston	12690	621.625	449	73.5
Central	6059	94.459	2	65.5
North Windle	12340	697.084	447	49.3
South Windle	8271	67.116	0	123.2
Hardshaw	11700	342.684	160	64.0
East Sutton	12310	1312.319	1190	100.6
West Sutton	10670	2429.151	2300	82.6
Parr	12750	1484.550	1395	142.3

TABLE 2

CHART SHOWING TOTAL RAINFALL IN INCHES SINCE 1889 (25 YEARS).

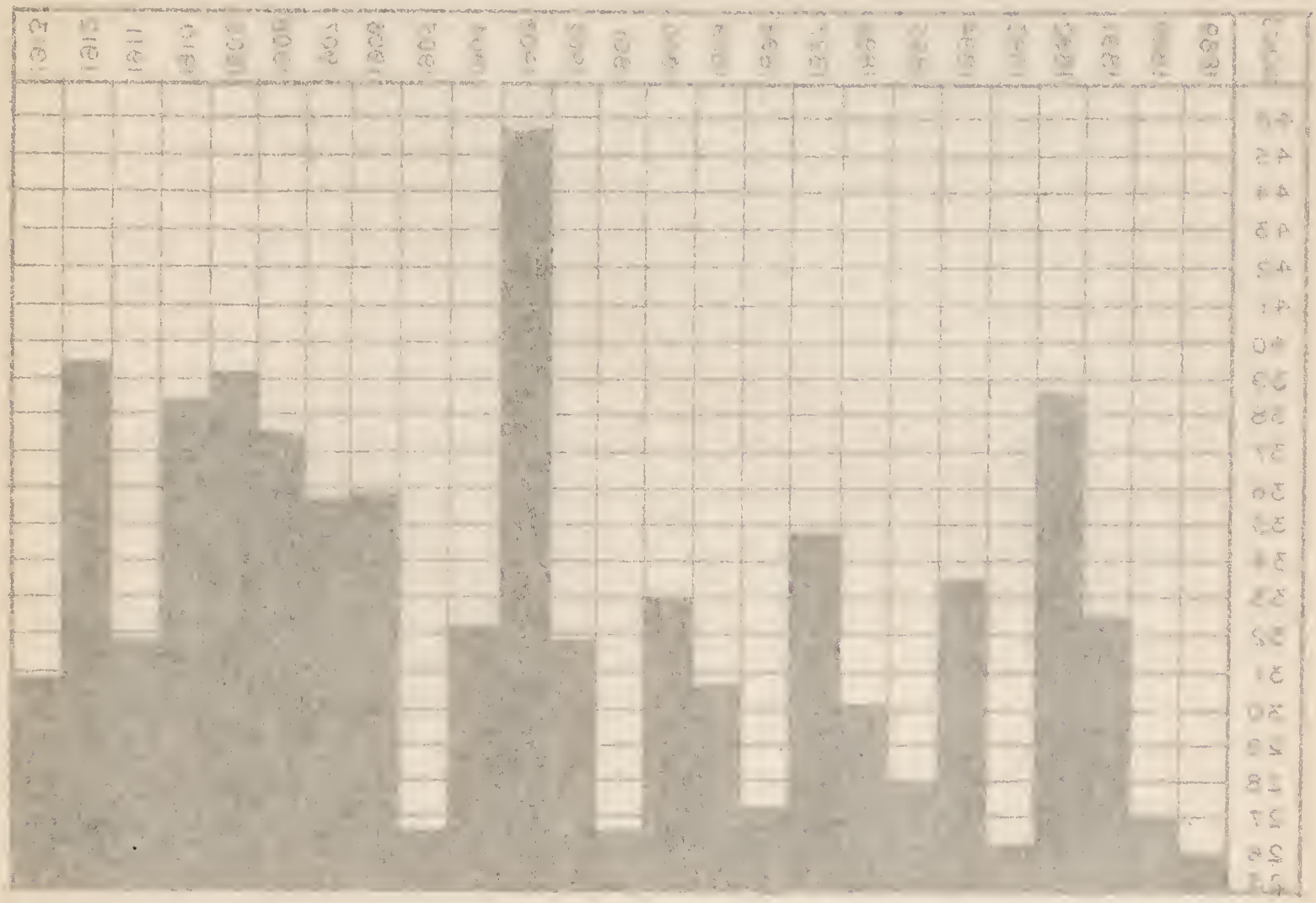
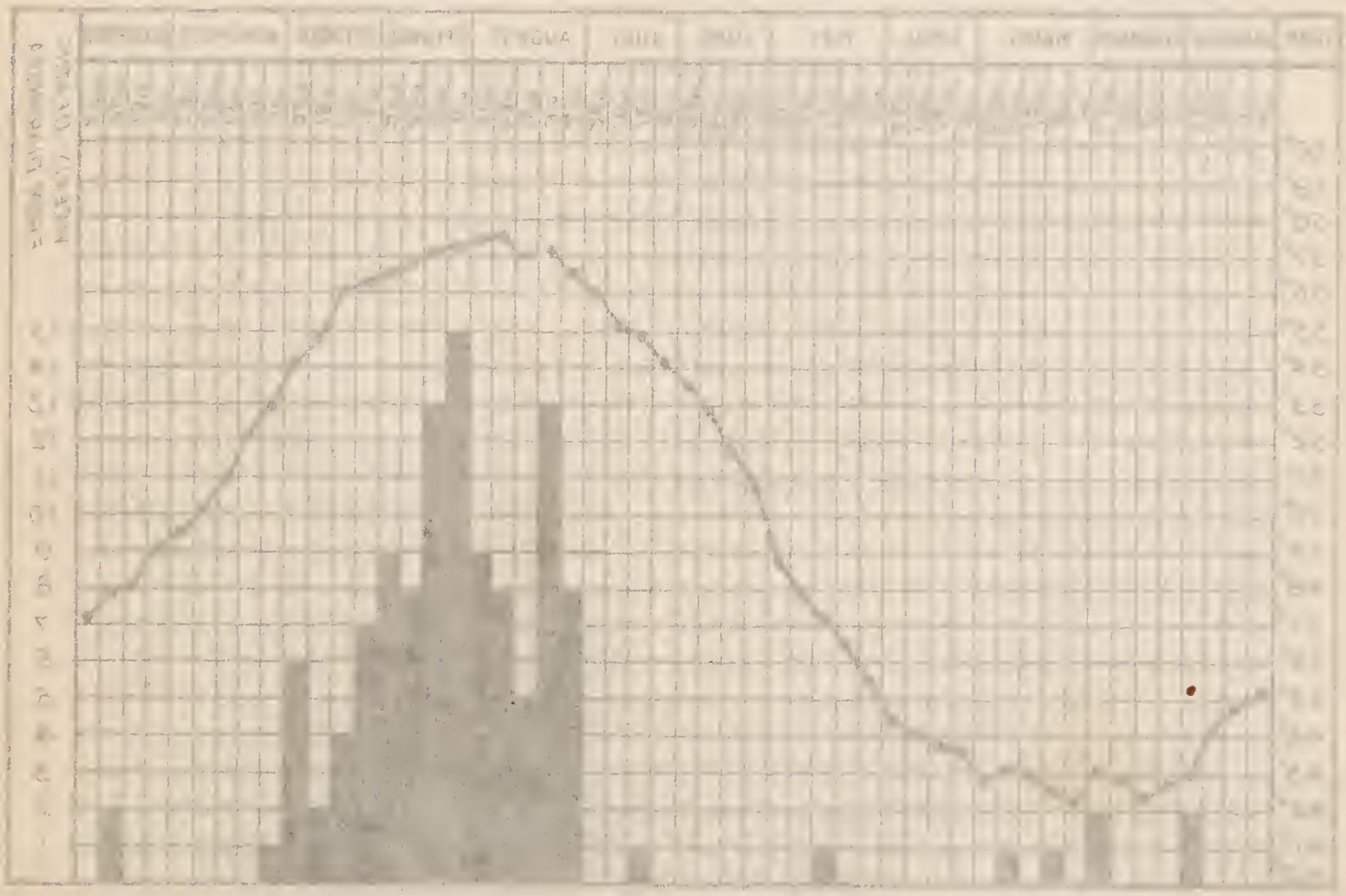


TABLE 3

CHART SHOWING THE MEAN TEMPERATURE OF THE SOIL AND THE WEEKLY NUMBER OF DEATHS FROM DIARRHŒA DURING 1913.



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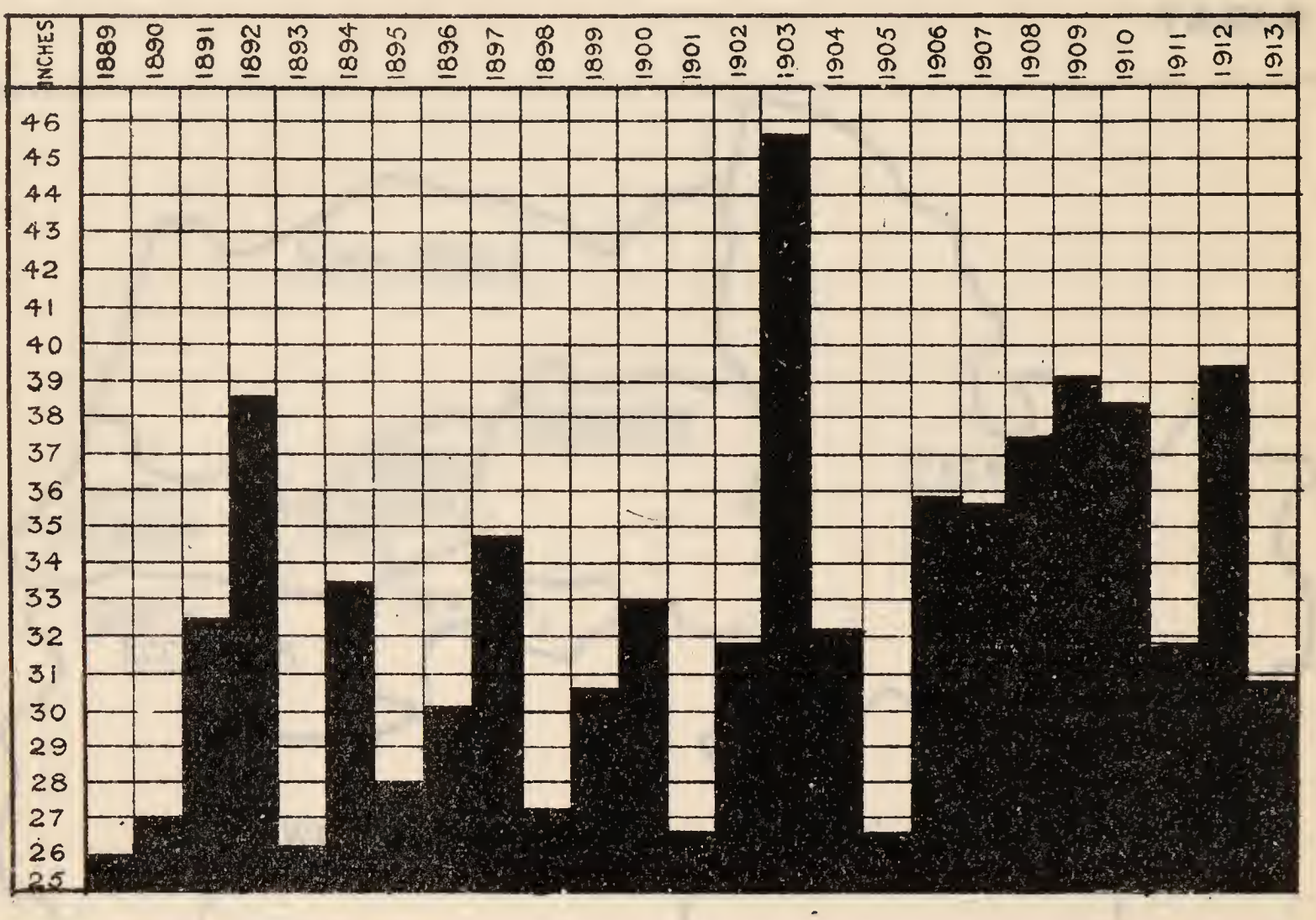

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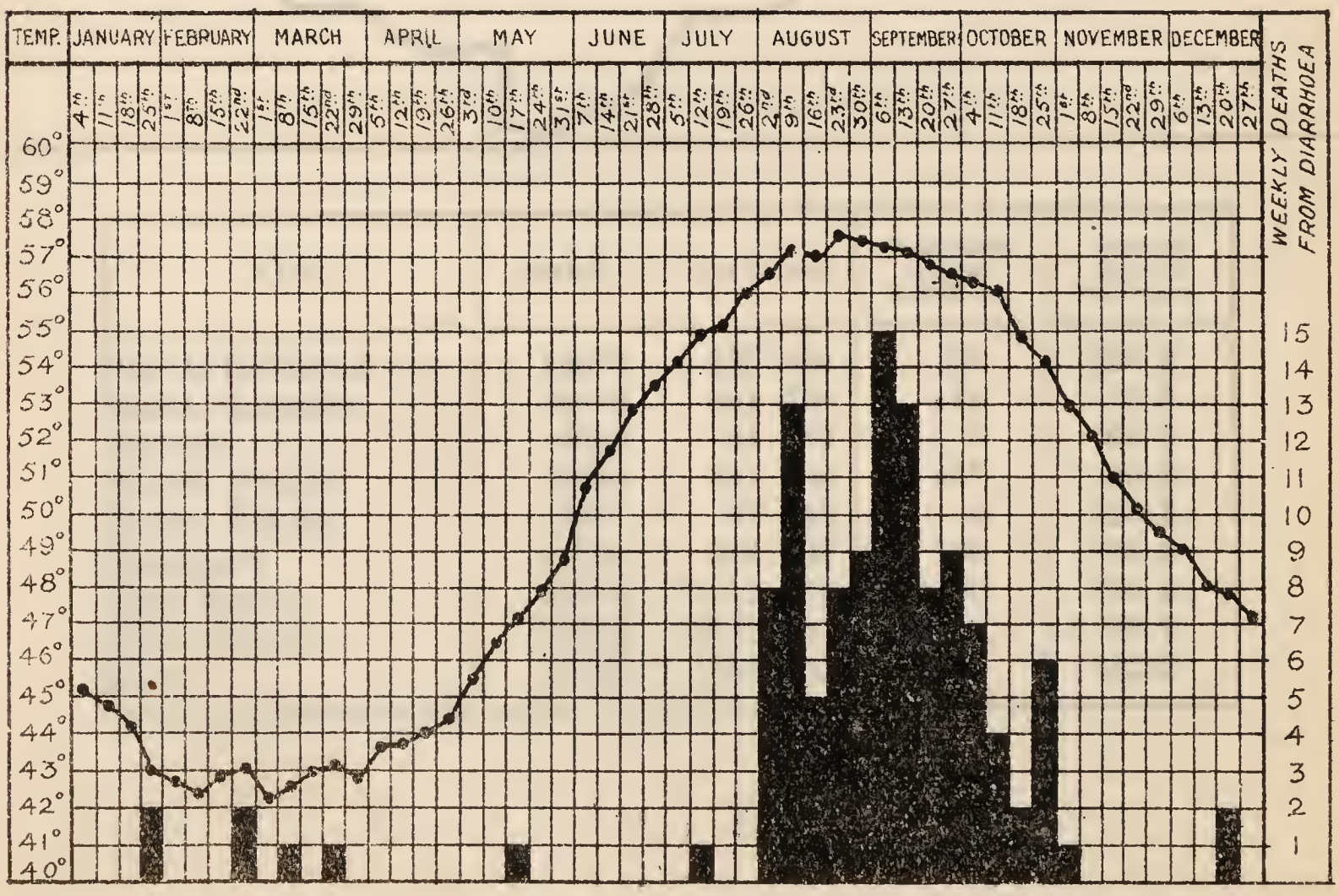


TABLE 4.

ABSOLUTE LIMITS

MEAN RECORD OF METEOROLOGICAL CONDITIONS AREA 14

| Date | Time | Barometer | Temperature | | | | Humidity | | | |

TABLE 4.

WEEKLY RECORD OF METEOROLOGICAL CONDITIONS TAKEN AT VICTORIA PARK.

Week ending.	Mean barometer in inches.	Maximum temperature	Minimum temperature	Mean temperature	Mean soil temperature (4 feet.)	Rainfall (total ins.)	WIND: Direction of Wind. Number of Hours per Week. N	NE	E	SE	S	SW	W	NW	Force of Wind. Total Mileage	Max-m'age per hour.	Max Gust.
Jan. 4	29·576	50·0	34·0	43·7	45·2	0·03	–	—	½	22	57	43	7½	—			
,, 11	29·612	53·0	34·0	44·4	44·7	0·92											
,, 18	29·297	44·0	25·0	38·0	44·3	1·36											
,, 25	29·393	51·0	29·0	40·2	43·0	1·26											
Feb. 1	29·577	49·5	29·5	38·3	42·5	0·74											
,, 8	29·663	53·5	34·0	44·5	42·2	0·75											
,, 15	30·199	55·2	30·5	42·4	42·8	0·37											
,, 22	30·093	44·5	31·5	37·8	43·0	0·00											
Mar. 1	29·840	52·0	29·7	41·0	42·0	0·03	—	—	1	22	18	4	20	22	718	16	26
,, 8	29·689	54·7	35·2	45·8	42·5	0·52	—	—	—	14	47	63	31	13	2872	34	52
,, 15	29·866	51·2	32·7	43·0	43·0	0·64	4	—	—	9½	44	46½	45	20	2034	30	44
,, 22	29·105	48·2	26·7	39·9	43·1	0·61	6½	3	2	36½	52	31	22½	18	2046	36	56
,, 29	29·542	52·0	32·5	42·4	42·5	0·60	11	27	50½	27	20	1½	22½	8½	1500	26	42
April 5	29·705	56·0	33·0	46·1	43·6	0·52	9	40½	25	24	5½	20½	35½	8	174	38	48
,, 12	29·818	55·0	33·7	44·1	43·6	0·71	44	4	10½	11½	11	20	32	35	1266	18	06
,, 19	29·434	52·5	32·5	44·7	43·9	0·82	—	—	7	26½	62½	32½	39½	—	1536	30	48
,, 26	29·536	64·2	37·0	50·6	44·4	0·31	1	6½	22½	50½	7	21½	45	13	1184	20	38
May 3	29·494	57·0	40·0	49·1	45·7	2·26	9	13	29	70	36½	2	8½	—	1158	24	42
,, 10	29·372	56·7	34·5	48·1	46·5	1·43	5	—	40½	45½	23	15½	24½	14	1250	16	30
,, 17	29·830	66·5	35·2	52·5	47·5	0·17	10	12	29½	54	25½	10	16½	10½	1108	20	24
,, 24	29·776	60·7	40·5	51·4	47·9	0·38	12	—	8	27	47	35	22	19	1690	28	44
,, 31	29·796	76·5	46·0	60·4	48·7	0·19	3	2	13½	26	34	26	50	13	696	8	22
June 7	29·713	73·0	44·5	57·5	50·6	0·88	5	9	18	37½	30	27½	27	4	1250	20	32
,, 14	29·819	61·5	46·5	53·5	51·7	1·01	—	—	20	47	44	22½	32½	2	1228	18	36
,, 21	29·881	77·0	48·0	62·8	52·5	0·33	—	—	7	40	26	29½	47	18½	1038	16	28
,, 28	29·906	68·0	50·0	58·5	53·5	0·57	—	—	11½	33	54½	24½	33	11½	1156	16	28
July 5	30·040	72·0	47·0	65·4	54·0	0·19	11	—	—	—	10	49½	76½	21			
,, 12	29·753	62·5	45·5	54·6	54·9	1·26											
,, 20	29·806	67·5	47·5	58·3	55·1	0·22											
,, 26	29·960	70·0	48·7	58·2	55·7	0·09											
Aug. 2	30·090	72·2	49·0	61·5	56·4	0·0	5	9	16	37	26½	15½	30½	28½	532	8	14
,, 9	30·010	74·0	41·5	57·1	57·1	0·04	38	22	22½	12½	—	—	36½	36½	828	12	26
,, 16	29·910	69·0	49·2	59·8	57·0	0·52	7	—	7	19½	45½	36½	30	13½	509	8	14
,, 23	30·013	75·5	41·0	59·5	57·4	1·10	4	10	30	11	37½	42½	24½	9½	1029	15	28
,, 30	30·100	77·9	49·8	61·6	57·3	0·40	2½	1½	48½	21	12½	26½	37½	17½	902	17	25
Sept. 6	30·770	69·5	52·0	59·9	57·2	0·0	17½	43	67	—	—	—	12	30½	1142	18	25
,, 13	29·882	71·2	42·0	57·8	57·1	0·03	1½	13½	30	35½	23	19	30½	14½	1174	20	29
,, 20	29·457	65·5	44·0	55·7	56·9	0·33	7	19	54	44½	12	7½	13½	11½	948	22	29
,, 27	29·786	71·5	51·0	59·4	56·5	1·14	—	7	31	69	24½	10	20½	7	1066	18	23
Oct. 4	29·884	74·5	52·0	60·1	56·5	0·00	—	47½	97	21½	2½	—	—	—	1648	20	29
,, 11	29·510	62·5	44·0	52·3	56·1	0·93	9	33½	86½	23	5½	½	3	7	1766	28	43
,, 18	29·980	63·0	39·0	52·2	54·8	0·53	—	—	10	50½	59½	16½	15½	15	1131	20	25
,, 25	29·641	63·2	32·0	43·0	54·5	0·32	3	3	24½	41	60	22½	9	5	1371	18	23
Nov. 1	29·283	60·0	36·6	51·0	52·7	0·60	—	—	19	49	76	24	—	—	1675	26	33
,, 8	29·486	57·5	37·0	46·8	52·2	0·35	2	1	8	29	44	30	32½	28½	1597	34	45
,, 15	29·183	56·0	37·0	47·2	50·9	1·39	3	—	20	36½	34	16	32½	25	1940	32	39
i, 22	29·694	60·5	37·0	50·0	50·2	1·31	—	—	—	4½	26	54½	63½	20½	2024	30	43
,, 29	29·960	57·6	34·0	45·8	49·4	0·31	—	—	2½	15	38	28½	51	34	1862	26	32
Dec. 6	29·563	56·5	35·0	44·5	49·0	1·19	6	2	12	22	29	18	54	28	1924	32	44
,, 13	29·844	55·5	32·4	45·6	48·2	0·39	2	—	9	17	20	20½	51	48½	1881	28	38
,, 20	30·150	53·0	32·0	43·5	47·8	0·08	24	23	22	8	14	10	33	33	1459	35	42
,, 27	29·787	51·8	35·0	44·6	47·0	0·73	6¼	—	—	—	8½	59½	61½	26	1796	38	46
Totals						30·77	266½	412	884½	1318½	1353	982½	1262½	790½	Highest readings		
Mean	29·738	60·3	37·9	50·19	49·6	0·59								Total	54,018	38	56

[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	130
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2	[illegible]
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3	[illegible]
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	[illegible]
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	—
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	15	[illegible]
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	—	
[illegible]	[illegible]	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		—
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLE 7.

	Males	Females		Males.	Females
All Ages	50309	46242	Under 5 years ...	6462	6285
			5 and under 10 ...	5918	5767
Under 1 year ...	1344	1301	10 ,, 15 ...	5419	5332
1 and under 2 ...	1250	1269	15 ,, 20 ...	5165	4475
2 ,, 3 ...	1348	1325	20 ,, 25 ...	4755	4021
3 ,, 4 ...	1276	1208			
4 ,, 5 ...	1244	1182	25 ,, 30 ...	4271	3773
			30 ,, 35 ...	4001	3440
5 ,, 6 ...	1178	1146	35 ,, 40 ...	3635	3080
6 ,, 7 ...	1234	1213	40 ,, 45 ...	2812	2487
7 ,, 8 ...	1206	1187	45 ,, 50 ...	2424	2154
8 9 ...	1150	1097			
9 ,, 10 ...	1150	1124	50 ,, 55 ...	1917	1690
			55 ,, 60 ...	1411	1345
10 ,, 11 ...	1106	1091	60 ,, 65 ...	910	953
11 ,, 12 ...	1083	1077	65 ,, 70 ...	652	651
12 ,, 13 ...	1103	1084	70 ,, 75 ...	349	478
13 ,, 14 ...	1062	1041			
14 ,, 15 ...	1065	1039	75 ,, 80 ...	141	231
			80 ,, 85 ...	51	64
15 ,, 16 ...	1033	946	85 ,, 90 ...	12	14
16 ,, 17 ...	1058	887	90 ,, 95 ...	4	2
17 ,, 18 ...	1036	862	95 ,, 100 ...	—	—
18 ,, 19 ...	1081	878			
19 ,, 20 ...	957	902	100 years and upwards	—	—
20 ,, 21 ...	951	835			

TABLE 8.

Institutions.	1911. Special Inmates (Patients, Paupers, Lunatics, etc.) Persons	Males	Females	Officials and their Families. Persons	Males	Females	Total. Persons	1913. Special Inmates (Patients, Paupers, Lunatics, etc.) Persons	Males.	Females	Officials and their Families. Persons	Males.	Females	Total. Persons
County Lunatic Asylum (part of) Rainhill	814	288	426	121	43	78	935	839	384	455	144	50	94	983
Providence Hospital ..	69	44	25	32	—	32	101	70	30	40	16	—	16	86
St. Helens Hospital ..	88	64	24	37	2	35	125	78	—	—	37	2	35	115
Fever Hospital	65	32	33	40	2	38	105	80	39	41	40	2	38	120
Blackbrook House Industrial School for Roman Catholic Girls	111	—	111	19	—	19	130	120	—	120	9	—	9	129

TABLE 9.

	1901	1911
Total Population	84,410	96,551
Total Families or Separate Occupiers, "Private" or Other	15,390	17,833
Population in "Private Families"	—	94,320
Number of Private Families	—	17,772
Tenements with more than two occupants per room:—		
Number 1832. Population, all ages		16,018
Do. under 10 years of age ...		5,694
Percentage of Population in "Private Families" living more than two in a room		17·0

TABLE 8.

Institution.	1911.							1913.						
	Special Inmates (Patients, Paupers, Lunatics, etc.)			Officials and their Families.			Total.	Special Inmates (Patients, Paupers, Lunatics, etc.)			Officials and their Families.			Total.
	Persons	Males	Females	Persons	Males	Females	Persons	Persons	Males.	Females	Persons	Males.	Females	Persons
County Lunatic Asylum (part of) Rainhill	814	388	426	121	43	78	935	839	384	455	144	50	94	983
Providence Hospital..	69	44	25	32	—	32	101	70	30	40	16	—	16	86
St. Helens Hospital..	88	64	24	37	2	35	125	78	—	—	37	2	35	115
Fever Hospital	65	32	33	40	2	38	105	80	39	41	40	2	38	120
Blackbrook House Industrial School for Roman Catholic Girls	111	—	111	19	—	19	130	120	—	120	9	—	9	129

TABLE 9.

	1901	1911
Total Population	84,410	96,551
Total Families or Separate Occupiers, "Private" or Other	15,390	17,833
Population in "Private Families"	—	94,320
Number of Private Families	—	17,772

Tenements with more than two occupants per room :—

Number, 1832. Population, all ages 16,018

Do. under 10 years of age ... 5,694

Percentage of Population in "Private Families" living more than two in a room ... ... 17·0

TABLE 6—CONTINUED.

TENEMENTS OF FIVE ROOMS AND UNDER WITH MORE THAN ONE PERSON PER ROOM.

Number of persons per room	Number of children under 10 years of age living in private families (or tenements)															Total number of persons living in private families (or tenements)	Total number of persons living in private families (or tenements)	Number of persons per room
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	—	—	—	2	4	3	2	3	3	1	—	38	329	8.66
3	—	—	—	—	—	—	28	40	36	35	20	13	3	1	—	120	1000	8.33
4	—	—	—	—	9	121	111	142	102	60	38	11	3	1	—	610	4824	7.91
5	—	—	—	2	330	314	310	134	62	42	15	3	3	1	—	1013	6250	6.17
6	—	—	4	302	312	310	171	112	71	33	1	9	1	—	—	1566	8428	5.38
7	—	3	238	521	503	112	130	61	31	15	3	3	—	—	—	1200	6131	5.11
8	21	288	230	113	300	185	61	30	15	1	—	—	—	—	—	1343	6512	4.85
Total	36	411	610	620	651	485	220	500	181	44	15	1	—	—	—	3001	14123	4.71
2	1	—	—	—	—	—	—	—	—	4	4	—	1	—	—	—	5	33
	0	—	—	—	—	—	—	—	3	1	1	1	3	—	—	—	4	30
	2	—	—	—	—	—	—	30	30	16	10	3	1	—	—	—	18	031
	4	—	—	—	—	5	110	80	22	41	13	2	1	—	—	—	351	3402
	3	—	—	—	2	304	152	110	21	33	15	1	1	—	—	—	201	3200
	5	—	—	2	314	105	111	82	30	53	3	3	—	—	—	—	332	3802
	1	—	4	103	193	132	30	12	10	8	—	—	1	—	—	—	831	3131
	0	30	104	311	300	158	20	52	11	—	—	—	—	—	—	—	1131	3150
Total		41	138	151	82	90	43	10	15	7	1	—	—	—	—	—	221	1324
3	0	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	8
	2	—	—	—	—	—	—	1	3	—	—	—	—	—	—	—	4	31
	4	—	—	—	—	1	10	6	2	5	—	—	—	—	—	—	20	301
	3	—	—	—	—	30	11	9	3	1	—	—	—	—	—	—	22	331
	5	—	—	4	15	12	15	3	—	—	1	—	—	—	—	—	80	317
	1	—	3	10	35	6	3	5	—	1	—	—	—	—	—	—	112	100
	0	42	131	42	51	9	2	4	—	—	—	—	—	—	—	—	201	913
Total		50	50	51	13	3	5	—	—	—	—	—	—	—	—	—	25	102
4	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	9
	3	—	—	—	—	3	1	—	—	—	—	—	—	—	—	—	4	31
	5	—	—	3	2	—	—	—	—	—	—	—	—	—	—	—	11	41
	4	—	3	13	—	—	—	—	—	—	—	—	—	—	—	—	17	45
	0	50	11	9	3	—	—	—	—	—	—	—	—	—	—	—	21	20

TABLE 9—*Continued.*

No. of Rooms per Tenement.	No. of children und'r 10 yrs of age	Number of Persons in Private Families (or Tenements). 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 & up	Total number of private families (or Tenements)	Population.
		Number of Private Families (or Tenements)																
1	0	26	17	6	2	—	—	—	—	—	—	—	—	—	—	—	51	86
	1	—	3	12	—	—	—	—	—	—	—	—	—	—	—	—	15	42
	2	—	—	3	8	—	—	—	—	—	—	—	—	—	—	—	11	41
	3	—	—	—	—	3	1	—	—	—	—	—	—	—	—	—	4	21
	4	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	1	6
	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		26	20	21	10	3	2	—	—	—	—	—	—	—	—	—	82	196
2	0	47	137	47	21	6	5	1	—	—	—	—	—	—	—	—	264	613
	1	—	2	76	22	9	3	2	—	1	—	—	—	—	—	—	115	406
	2	—	—	4	42	17	13	3	—	—	1	—	—	—	—	—	80	374
	3	—	—	—	—	36	11	6	3	1	—	—	—	—	—	—	57	321
	4	—	—	—	—	1	16	6	5	2	—	—	—	—	—	—	30	201
	5	—	—	—	—	—	—	1	3	—	—	—	—	—	—	—	4	31
	6	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	8
		47	139	127	85	69	48	19	12	4	1	—	—	—	—	—	551	1954
3	0	36	407	271	200	128	59	25	11	—	—	—	—	—	—	—	1137	3720
	1	—	4	403	153	125	76	45	16	8	—	—	1	—	—	—	831	3437
	2	—	—	5	314	162	111	83	36	23	2	2	—	—	—	—	738	3865
	3	—	—	—	3	204	126	110	71	33	12	1	1	—	—	—	561	3566
	4	—	—	—	—	2	110	90	53	47	18	6	1	—	—	—	327	2405
	5	—	—	—	—	—	—	26	20	19	10	2	1	—	—	—	78	647
	6	—	—	—	—	—	—	—	2	1	1	1	2	—	—	—	7	70
	7	—	—	—	—	—	—	—	—	4	*1	—	1	—	—	—	2	22
		36	411	679	670	621	482	379	209	131	44	12	7	—	—	—	3681	17732
4	0	57	586	530	443	299	182	91	39	12	4	—	—	—	—	—	2243	8275
	1	—	3	538	257	263	175	135	91	31	12	2	2	—	—	—	1509	7131
	2	—	—	5	405	275	210	187	113	57	33	7	6	1	—	—	1299	7488
	3	—	—	—	5	289	214	210	134	99	43	12	3	2	1	—	1012	6820
	4	—	—	—	—	5	151	111	146	106	60	26	11	2	1	—	619	4888
	5	—	—	—	—	—	—	43	40	39	22	20	12	3	1	—	180	1609
	6	—	—	—	—	—		—	6	4	7	5	3	2	1	—	28	285
	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		57	589	1073	1110	1131	932	777	569	348	181	72	37	10	4	—	6890	36496
Total 1–4	—	166	1159	1900	1875	1824	1464	1175	790	483	226	84	44	10	4	—	11204	56378
5	—	39	312	536	608	659	599	532	390	272	186	116	51	19	6	3	4328	25008
6	—	11	114	154	187	208	187	160	111	93	46	40	19	8	2	3	1343	7761
7	—	3	30	51	82	64	44	40	44	23	14	7	4	2	1	1	410	2287
8	—	—	15	28	43	45	34	23	21	18	7	8	4	1	2	1	250	1468
9	—	—	6	17	19	16	12	12	4	5	6	2	—	—	1	—	100	548
10 and upwards	—	—	2	17	16	19	24	17	14	14	8	1	2	2	1	—	137	870
Totals.	—	219	1638	2703	2830	2835	2364	1959	1374	908	493	258	124	42	17	8	17772	94320

Tenements of Five Rooms and Upwards, with more than Two Persons per Room.

No. of rooms per tenement.	Number of persons per tenement	Number of Children under 10 Years of Age in Private Families (or Tenements) 0	1	2	3	4	5	6	7	8	9	10	Total number of private families (or tenements).	Population. All ages.	Under 10
		Number of Private Families (or Tenements).													
5	11	4	11	25	34	32	8	2	—	—	—	—	116	1276	343
	12	—	2	5	15	16	7	6	—	—	—	—	51	612	192
	13	—	—	1	—	10	5	2	1	—	—	—	19	247	86
	14	—	—	1	—	2	1	2	—	—	—	—	6	84	27
	15	—	—	—	—	—	—	3	—	—	—	—	3	45	18
6	13	—	—	3	1	1	3	—	—	—	—	—	8	104	28
	14	—	—	—	1	—	1	—	—	—	—	—	2	28	8
	15	—	—	1	—	—	2	—	—	—	—	—	3	45	12
7	15	—	—	—	—	—	—	—	—	—	—	—	1	15	1

*This family included eight children under ten years of age.

1	2	3	4	5	6	7	8	9	10
1 food	2 foods	3 foods	4 foods	5 foods	6 foods	7 foods	8 foods	9 foods	10 foods
2	21	301	391	503	40	53	11	9	8

PROPORTION PER 1,000 INFANTS OF INFANTS CONSISTING OF—

TABLE II

1	2	3	4	5	6	7	8	9	10	11	12
1 person	2 persons	3 persons	4 persons	5 persons	6 persons	7 persons	8 persons	9 persons	10 persons	11 persons	12 or more persons
13	83	125	120	100	132	110	11	91	58	12	11

PROPORTION PER 1,000 FAMILIES OF FAMILIES CONSISTING OF—

TABLE IO

WEEKLY SCALE OF QUANTITIES FOR FOOD IN INFANCY

CONSISTING OF—

1 food	2 foods	3 foods	4 foods	5 foods	6 foods	7 foods	8 foods	9 foods	10 foods
5·35	1·13	1·01	1·25	1·10	0·80	0·80	0·33	0·21	1·51

TABLE 10.

Proportion, per 1,000 Families, of Families consisting of—											
1 person	2 persons	3 persons	4 persons	5 persons	6 persons	7 persons	8 persons	9 persons	10 persons	11 persons	12 persons or more.
12	92	152	159	160	133	110	77	51	28	15	11

TABLE 11.

Proportion, per 1,000 Tenements, of Tenements consisting of—									
1 room	2 rooms	3 rooms	4 rooms	5 rooms	6 rooms	7 rooms	8 rooms	9 rooms	10 rooms ormore
5	31	207	387	243	76	23	14	6	8

TABLE 12.

Average Number of Occupants per Room in Tenements, consisting of—									
1 room	2 rooms	3 rooms	4 rooms	5 rooms	6 rooms	7 rooms	8 rooms	9 rooms	1 to 9 rooms
2·39	1·77	1·61	1·32	1·16	0·96	0·80	0·73	0·61	1·24

TABLE 13.

TABLE 13.

Number of Sanitary Notices Served.	1905	1906	1907	1908	1909	1910	1911	1912	1913
To clean choked drains and w.c.'s	387	477	459	502	358	424	313	225	337
,, repair or relay defective drains	169	161	109	112	102	91	58	87	107
,, drain dwelling-houses	10	0	—	—	3	2	6	40	10
,, disconnect and ventilate drains	137	155	140	60	62	24	5	10	3
,, disconnect downspouts	32	26	24	35	29	10	5	8	10
,, repair or lengthen w.p. to slopstones ..	64	47	59	139	86	54	33	42	48
,, provide w.p. to slopstones	43	23	16	33	25	29	60	20	29
,, provide slopstones	21	41	34	44	32	53	55	27	29
,, repair w.c.'s, baths, basins, lavatories and cisterns	70	47	76	123	92	132	171	88	121
,, repair roofs of dwelling-houses	119	107	98	154	119	257	161	126	209
,, cleanse backyards, privies, & passages ..	50	36	41	76	74	19	16	11	10
,, cleanse and whitewash filthy dwellings ..	33	62	31	42	24	36	19	30	23
,, provide doors to privies, pail closets, and ashpits	476	228	393	438	488	330	340	211	182
,, repair or re-hang doors to pail closets, ashpits and privies	289	105	202	321	373	405	328	205	322
,, repair privies and ashpits	129	85	109	91	138	221	16	33	56
,, repair eaves and downspouts	121	133	137	167	173	232	195	174	103
,, provide eaves and downspouts	115	59	95	90	78	141	119	138	79
,, repair pavement, etc., in backyards ..	213	165	211	398	318	323	6	113	174
,, re-hang windows	204	36	81	8	7	9	4	5	29
,, repair pavement and floors in dwelling-houses	59	76	75	100	65	179	145	179	139
,, remove fowls, pigeons, etc., from near dwellings	9	9	8	19	3	9	9	9	12
,, remove pigs	23	13	10	15	10	15	14	14	10
,, remove rubbish	24	20	18	46	52	7	8	6	6
,, remove manure	17	11	12	20	10	14	7	3	17
,, reconstruct middensteads	4	23	8	14	9	1	2	4	8
,, clean foul ditches and cesspools . ..	28	22	17	6	39	11	4	12	14
,, provide or repair ashboxes	536	264	527	532	328	54	17	42	78
,, overcrowding	20	29	12	30	11	36	36	24	20
,, replaster walls or ceilings of dwellings	79	86	62	173	107	288	209	248	164
,, prevent dampness in dwellings.. ..	25	26	22	41	25	74	48	21	72
,, remove sheds, etc., from backyards ..	10	9	8	5	3	7	8	4	8
,, remedy defects in bakehouses	24	23	25	35	31	17	7	5	2
,, remedy defects in workshops	15	10	16	39	20	22	9	12	42
,, remedy defects in cowsheds & dairies	21	10	24	1	2	15	10	4	7
,, provide water supply	11	..	..	..	..	31	1	5	33
,, miscellaneous	173	153	170	257	205	285	297	187	144
,, convert to water carriage	102	118	381	264	169	322	764	1128	2446
Totals	3862	2895	3508	4430	3670	4209	3505	3500	5093

TABLE 14

CLASSES OF INSTRUCTION IN SECONDARY SCHOOLS—SESSION 1911–12

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

TABLE 14.

MEASLES—AGE INCIDENCE IN RELATIONSHIP TO SCHOOLS.

School.	1½	1–2	2–3	3–4	4–5	5–6	6–7	7–8	8–9	9–10	10	Total
Allanson Street Council..	4	7	6	7	7	7	5	7	5	1	1	57
Blackbrook R.C.	1	—	3	2	—	2	2	—	1	—	—	11
Christ Church Mission...	5	5	1	7	3	12	7	3	—	—	—	43
Crown Glass Works	—	—	—	—	—	—	—	—	—	—	—	—
Gerard R.C.	3	3	5	6	6	5	—	3	3	—	—	34
Higher Grade	—	2	4	3	11	6	2	2	6	2	2	40
Holy Cross R.C.	1	6	11	7	16	14	5	—	2	—	—	62
Knowsley Road Und. ..	1	12	9	4	9	7	6	4	3	—	—	55
Lowe House R.C.	1	5	5	2	1	4	3	1	2	—	1	25
Laffak	—	—	—	—	—	—	—	—	—	—	—	—
Marshall Cross	2	6	5	7	8	12	12	9	3	4	—	68
Merton Bank Council....	5	8	7	12	8	12	11	2	6	2	1	74
Nutgrove Wesleyan	2	7	9	10	10	16	10	3	5	2	6	80
Parish Church	3	5	—	3	10	9	7	3	3	—	1	44
Parr Flat C.E.	—	2	4	1	2	9	3	—	—	—	1	22
Parr Mount C.E.	2	10	5	5	10	21	10	4	1	—	—	68
Peasley Cross C.E.	1	8	4	6	4	15	7	5	1	—	—	51
Ravenhead C.E.	2	6	8	10	10	18	10	5	2	—	—	71
Rivington Rd. Council..	4	4	7	4	13	18	8	2	2	2	4	68
Robins Lane Council ..	7	10	12	15	16	35	15	6	6	3	8	133
St. Annes R.C.	5	13	20	18	19	20	14	16	7	3	1	136
St. Austin R.C.	—	5	10	6	9	12	7	2	1	1	—	53
St. Helens Und.	2	5	6	2	4	—	1	—	—	—	—	20
St. Helens Wes.	2	2	3	7	2	7	1	1	1	—	—	26
St. John's C.E.	4	3	4	7	5	7	1	—	—	—	2	33
St. Josephs R.C.	10	16	12	16	12	13	16	9	5	1	2	112
St. Mary's C.E.	—	4	2	1	4	1	1	—	1	—	2	16
St. Mary's, York Street.	2	3	3	3	6	3	6	10	3	—	1	40
St. Patrick's R.C.	1	5	5	4	2	1	2	1	1	1	—	23
St. Peter's C.E.	2	3	5	2	1	4	5	3	3	—	—	28
St. Teresa R.C.	4	2	5	4	4	6	3	2	1	—	2	33
St. Thomas C.E.	5	5	4	2	8	9	1	3	1	—	1	39
St. Vincent's R.C.	—	—	2	—	—	2	2	—	—	—	—	6
Sacred Heart R.C.	2	5	7	7	9	17	7	1	1	—	—	56
Sutton C.E.	8	9	17	18	21	39	26	21	6	3	2	170
Sutton Manor	1	2	2	—	3	3	4	2	—	2	1	20
Sutton St. Joseph R.C.	—	3	2	2	3	1	—	2	—	—	—	13
Thatto Heath Council..	2	7	5	6	8	19	2	—	2	—	2	53
Windle C.E.	1	5	4	7	8	16	5	1	1	1	1	50
Windleshaw R.C.	2	3	3	2	9	6	5	4	3	1	—	38
Private Schools and Schools outside Borough	2	3	5	3	5	5	1	1	2	—	1	28
Total	99	209	231	228	286	413	233	138	90	29	43	1999

Note: Children not attending School have been placed, for the purposes of this and the following table, in the School at which the other children of the family attend.

Month	1901		1902		1903		1904		1905		1906		1907		1908		1909		1910		1911		1912		1913	
	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.
N. Excelsior	12	10	11	12	15	13		10	12	16	12	30	14	34	12	48	16									
S. Excelsior	0	4	2	11	11	2		13	11	4	4	13	15	51	0	38	19									
Central	0	13	12	13	14	10		0	16	3	2	15	10	15	8	38	33									
North Wallace	12	12	10	17	10	12		11	15	11	10	0	10	53	13	13	13									
South Wallace	10	11	2	12	11	12		2	4	8	1	2	8	8	2	18	4									
Hardgrave	2	14	13	16	15	14		15	2	2	0	4	13	12	14	32	3									
East Sutton	4	11	11	12	10	3		10	4	10	10	4	2	2	12	33	6									
West Sutton	30	10	30	32	0	0		2	1	3	2	32	1	1	4	44	4									
Ward	0	13	30	8	10	15		14	1	18	0	2	14	0	2	13	3									
Totals	21	114	90	143	92	152	82	140	51	118	150	131	100	101	95	113	52	88	22	81	113	60	130	81	523	100

TABLE 18.

DEATHS - MONTHLY RETURN OF CASES

School	Jan.	Feb.	Mch.	Apl.	May.	Jun.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
Allanson Street Council	8	13	15	14	7	3	—	—	—	—	—	—	75
Bishopsgate R.C.	5	5	4	1	3	—	—	—	—	—	—	—	11
Christ Church Mission	6	8	10	1	—	3	—	—	—	—	—	—	43
Cowan Street Mission	—	—	—	—	—	—	—	—	—	—	—	—	—
Cowan Street R.C.	3	12	6	1	—	—	—	—	—	—	—	—	34
Hospital Chapel	7	10	10	3	3	3	—	—	—	—	—	—	46
Hospital R.C.	—	33	53	8	5	3	—	—	—	—	—	—	99
Knowsley Road C.E.	15	8	2	—	14	10	—	—	—	—	—	—	29
Lower House R.C.	3	3	2	4	2	1	—	—	—	—	—	—	32
Malvern	—	—	—	—	—	—	—	—	—	—	—	—	—
Marshall Street	32	23	—	—	—	—	—	—	—	—	—	—	55
Mount Pleasant Council	58	32	8	8	5	—	—	—	—	—	—	—	14
Newsham Road C.E.	3	14	31	18	1	—	—	—	—	—	—	—	80
Parish Church	5	3	1	30	5	1	—	—	—	—	—	—	44
Park Hill C.E.	—	—	5	14	4	3	—	—	—	—	—	—	35
Park Street C.E.	10	13	18	3	11	1	—	—	—	—	—	—	56
Prescot Road C.E.	12	53	6	3	5	1	—	—	—	—	—	—	81
Rainhill C.E.	4	11	64	6	1	—	—	—	—	—	—	—	17
Rainhill Council	54	25	6	10	10	2	—	—	—	—	—	—	133
Ravenhead Road Council	14	6	4	53	15	1	—	1	1	—	—	—	95
Sacred Heart R.C.	4	13	84	52	2	5	—	—	—	1	—	—	130
St. Anne's R.C.	4	52	13	1	3	—	—	—	—	—	—	—	23
St. Helens Land	6	4	3	4	—	3	—	—	—	—	—	—	20
St. Helens W.S.	11	11	1	—	5	1	—	—	—	—	—	—	30
St. Joseph's C.E.	—	10	12	6	1	1	—	—	—	—	—	—	33
St. Joseph R.C.	13	14	32	50	50	8	—	—	—	—	—	—	115
St. Mary's C.E.	3	5	4	—	4	3	—	—	—	—	—	—	19
St. Mary's York Street	10	10	6	8	5	1	—	—	—	—	—	—	40
St. Peter's R.C.	8	6	6	3	—	—	—	—	—	—	—	—	23
St. Thomas's C.E.	4	6	7	3	3	3	—	—	—	—	—	—	26
St. Thomas's R.C.	13	3	6	3	3	3	—	—	—	—	—	—	33
St. Vincent R.C.	—	—	—	1	3	3	—	—	—	—	—	—	6
Sacred Heart R.C.	14	31	6	3	3	—	—	—	—	—	—	—	56
Sutton C.E.	1	21	10	10	31	30	3	—	—	1	5	—	110
Sutton Alpha	—	3	17	3	—	—	—	1	—	—	—	—	30
Sutton St. Joseph R.C.	3	2	3	1	5	—	—	—	—	—	—	—	13
Sutton Health C.	11	34	1	1	2	3	—	—	—	—	—	—	23
Wallace C.E.	1	2	18	2	3	4	—	—	—	—	—	—	30
Wallsgrave R.C.	13	3	6	3	3	3	—	—	—	—	—	—	33
Private Schools and Schools out of Borough	5	7	8	10	1	—	—	—	—	—	—	—	38
	358	270	481	11	190	308	3	5	1	5	5	—	1666

TABLE 15.

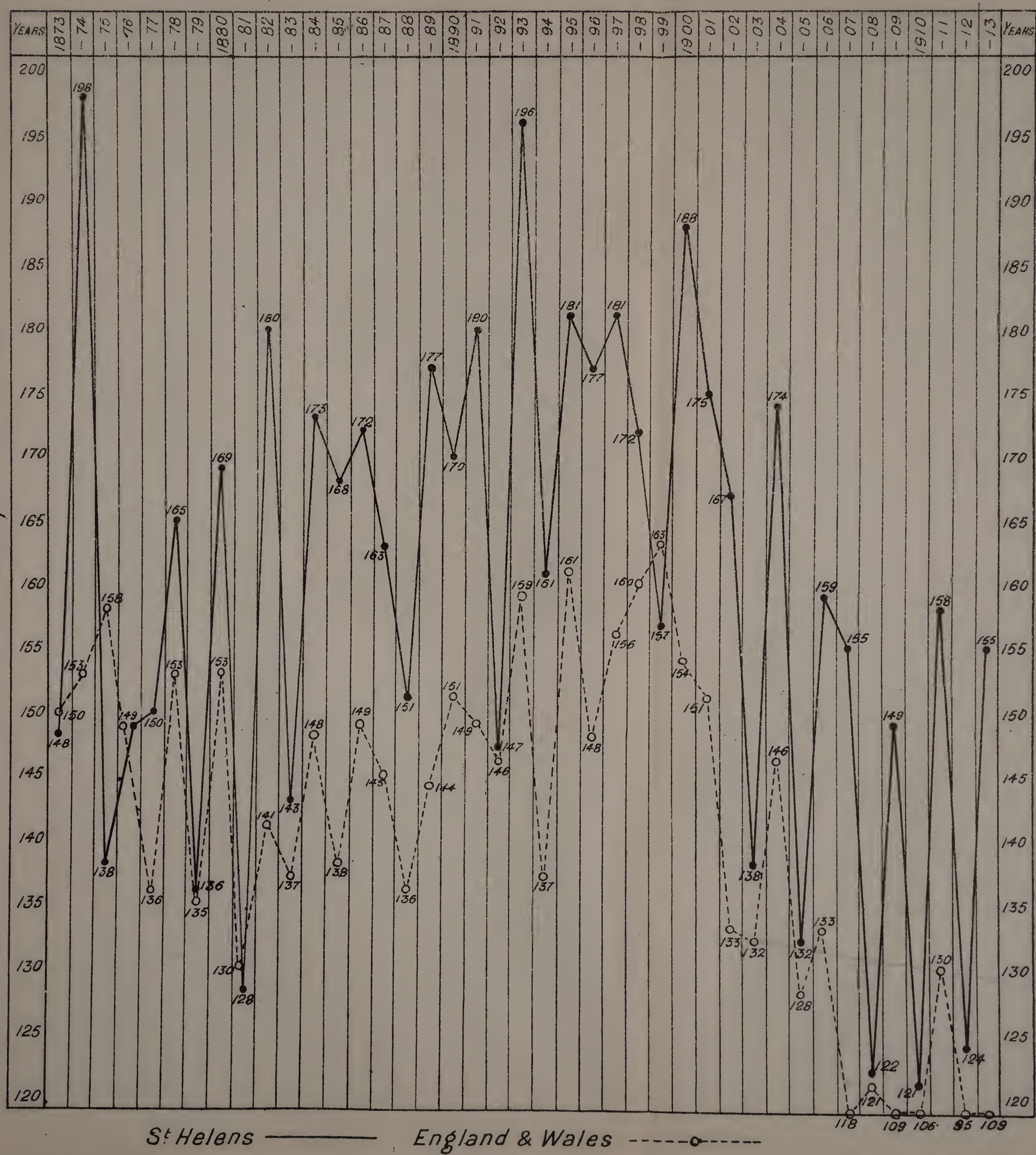
MEASLES—MONTHLY RETURN OF CASES.

School.	Jan.	Feb.	Mch	Apl.	May	Jun	July	Aug	Sep.	Oct	Nov	Dec.	Total
Allanson Street Council..	8	13	12	14	7	3	—	—	—	—	—	—	57
Blackbrook R.C.	2	2	4	1	2	—	—	—	—	—	—	—	11
Christ Church Mission ..	9	8	16	7	—	3	—	—	—	—	—	—	43
Crown Glass Works	—	—	—	—	—	—	—	—	—	—	—	—	—
Gerard R.C.	9	15	9	1	—	—	—	—	—	—	—	—	34
Higher Grade	7	16	10	2	3	2	—	—	—	—	—	—	40
Holy Cross R.C.	—	23	27	8	2	2	—	—	—	—	—	—	62
Knowsley Road Und. ..	12	8	5	—	14	16	—	—	—	—	—	—	55
Lowe House R.C.....	3	3	5	6	7	1	—	—	—	—	—	—	25
Laffak	—	—	—	—	—	—	—	—	—	—	—	—	—
Marshalls Cross	35	33	—	—	—	—	—	—	—	—	—	—	68
Merton Bank Council .	28	25	8	8	5	—	—	—	—	—	—	—	74
Nutgrove Wes.	3	24	34	18	1	—	—	—	—	—	—	—	80
Parish Church	7	3	1	30	2	1	—	—	—	—	—	—	44
Parr Flat C.E.	—	—	2	14	4	2	—	—	—	—	—	—	22
Parr Mount C.E.	19	13	18	3	14	1	—	—	—	—	—	—	68
Peasley Cross C.E.	17	23	6	2	2	1	—	—	—	—	—	—	51
Ravenhead C.E.	4	11	49	6	1	—	—	—	—	—	—	—	71
Rivington Road Council	14	6	4	23	12	7	—	1	1	—	—	—	68
Robins Lane Council....	24	57	9	19	19	5	—	—	—	—	—	—	133
St. Anne's R.C.	4	13	84	27	5	2	—	—	—	1	—	—	136
St. Austin R.C.	4	27	13	7	2	—	—	—	—	—	—	—	53
St. Helens Und.	6	4	3	4	—	3	—	—	—	—	—	—	20
St. Helens Wes.	11	11	1	—	2	1	—	—	—	—	—	—	26
St. John's C.E.	—	10	15	6	1	1	—	—	—	—	—	—	33
St. Joseph R.C.	13	14	37	20	20	8	—	—	—	—	—	—	112
St. Mary's C.E.	3	2	4	—	4	3	—	—	—	—	—	—	16
St. Mary's, York Street	10	10	9	8	2	1	—	—	—	—	—	—	40
St. Patrick R.C.	8	6	6	3	—	—	—	—	—	—	—	—	23
St. Peter's C.E.	1	9	9	6	3	—	—	—	—	—	—	—	28
St. Teresa's R.C.	12	3	9	3	3	3	—	—	—	—	—	—	33
St. Thomas' C.E.	5	7	—	18	5	4	—	—	—	—	—	—	39
St. Vincent R.C.	—	—	—	1	3	2	—	—	—	—	—	—	6
Sacred Heart R.C.	14	31	6	3	2	—	—	—	—	—	—	—	56
Sutton C.E.	1	67	16	19	31	30	3	—	—	1	2	—	170
Sutton Manor	—	3	14	2	—	—	—	1	—	—	—	—	20
Sutton St. Joseph R.C.	2	5	3	1	2	—	—	—	—	—	—	—	13
Thatto Heath C.	11	24	7	4	5	2	—	—	—	—	—	—	53
Windle C.E.	7	13	18	7	3	2	—	—	—	—	—	—	50
Windleshaw R.C.	13	21	3	—	1	—	—	—	—	—	—	—	38
Private Schools and Schools out of Borough	2	7	8	10	1	—	—	—	—	—	—	—	28
	328	570	484	11	190	106	3	2	1	2	2	—	1999

TABLE 16.

Wards.	1901		1902		1903		1904		1905		1906		1907		1908		1909		1910		1911		1912		1913	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
N. Eccleston		15		16		11		17		12		13		10		16		16		15	29	14	24	15	48	16
S. Eccleston..		6		7		5		11		11		8		13		11		7		7	13	12	27	6	38	19
Central		9		13		15		13		14		10		6		16		3		8	12	10	12	8	28	20
North Windle		17		15		10		12		16		18		11		12		11		10	9	16	23	13	17	13
South Windle		10		11		8		18		11		18		8		7		9		7	8	8	8	8	18	7
Hardshaw ..		8		14		17		16		12		14		12		8		5		6	7	13	18	17	25	9
East Sutton .		7		14		11		17		10		9		10		7		10		10	4	5	5	15	22	6
West Sutton .		36		40		30		27		9		6		7		7		3		5	25	7	7	4	44	4
Parr		6		13		20		9		10		12		14		7		16		6	6	14	6	5	13	6
Totals ...	54	114	80	143	66	127	85	140	71	118	126	131	106	101	92	113	78	98	55	91	113	99	130	91	253	100

INFANTILE MORTALITY RATE — ST. HELENS AND ENGLAND AND WALES - 1873-1913



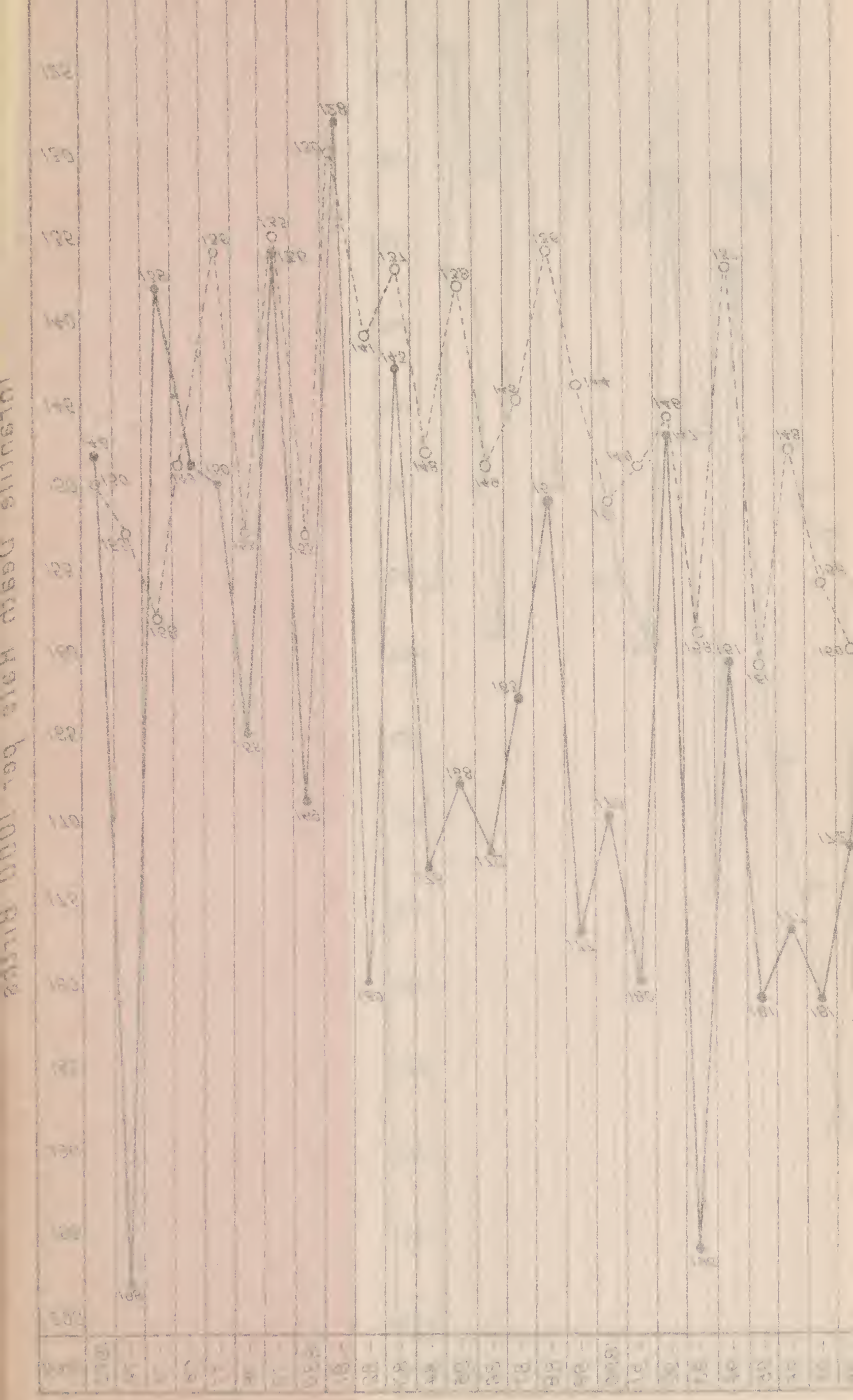
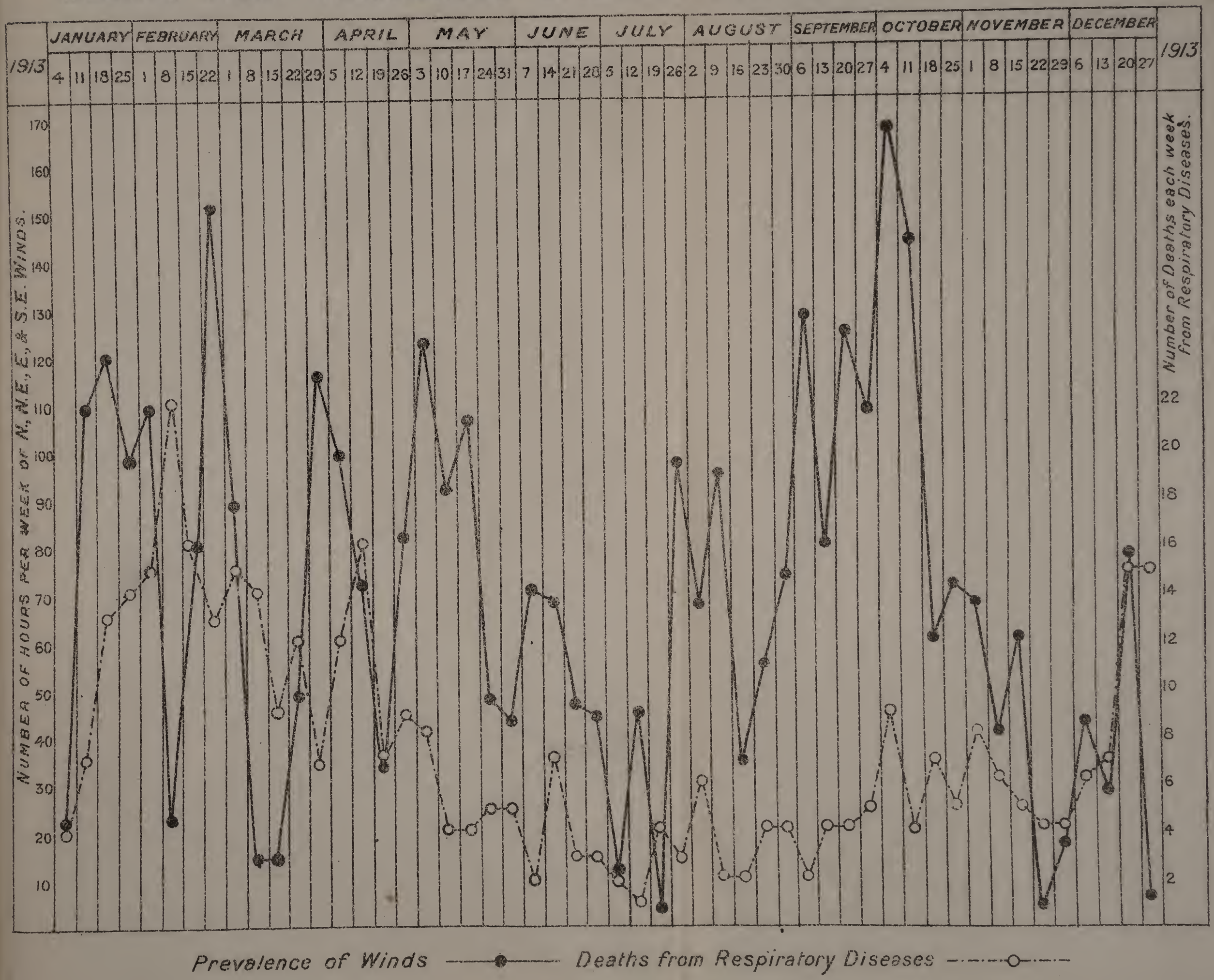


TABLE 18

CHART SHOWING THE PREVALENCE OF CERTAIN WINDS, AND THE DEATHS FROM RESPIRATORY DISEASES DURING THE YEAR 1913.



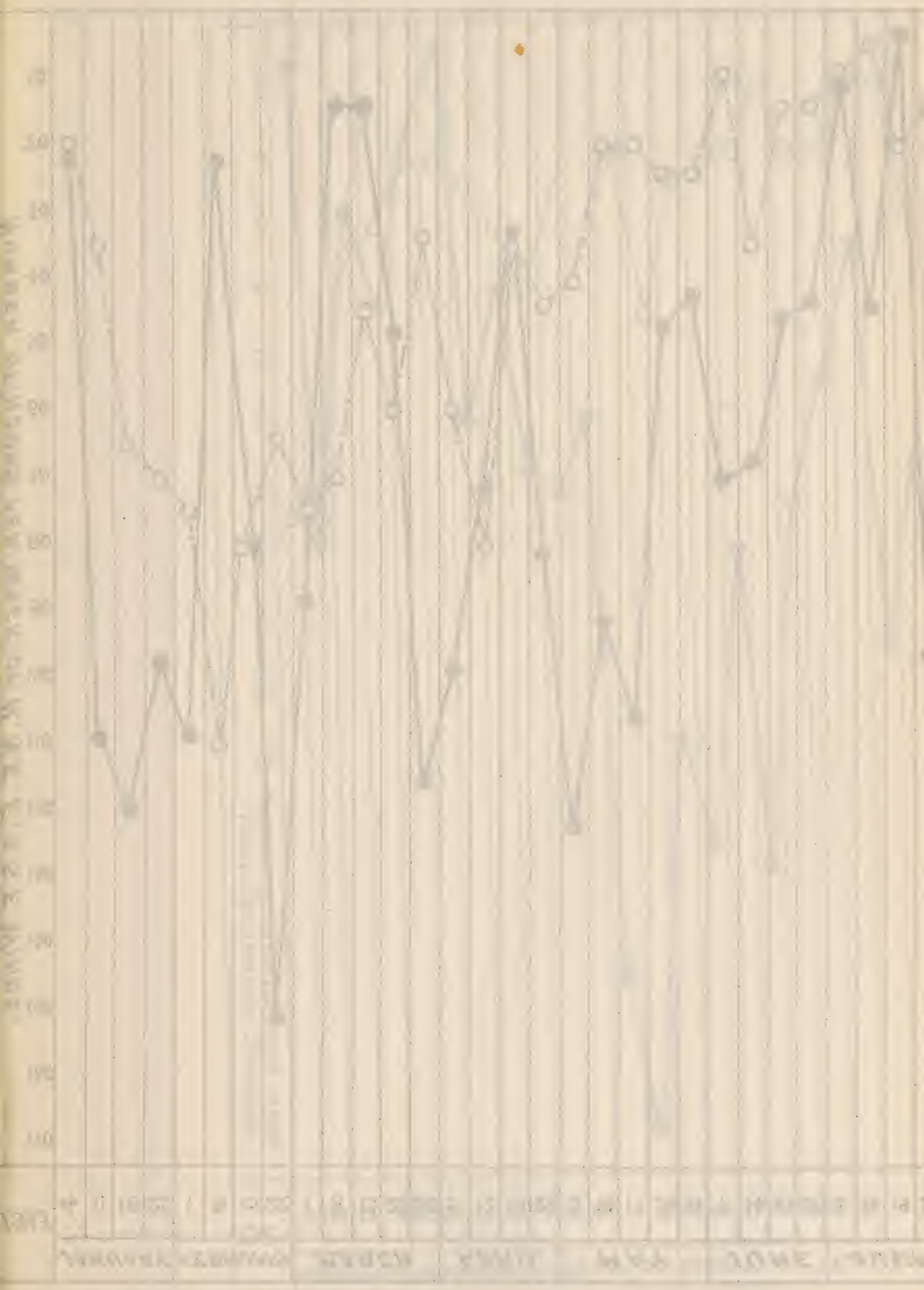


TABLE 19.

LOCAL GOVERNMENT BOARD TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1913 AND PREVIOUS YEARS.

Year.	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths		Nett Deaths belonging to the District.			
			Nett.						Under 1 year of age.		At all Ages.	
		Uncorrected Number.	Number.	Rate.	Number.	Rate.	of Non-residents registered in the District.	of Residents not registered in the District.	Number.	Rate per 1,000 Nett Births.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1908	93812	3311	—	35·2	1436	15·3	88	159	404	122	1507	16·0
1909	95161	3050	—	32·0	1707	17·9	93	148	457	149	1762	18·5
1910	96523	3158	—	32·7	1357	14·0	73	123	384	121	1407	14·5
1911	96870	3204	3247	33·5	1707	17·6	83	149	515	158	1773	18·3
1912	98159	3103	3137	31·9	1429	14·5	76	68	389	124	1521	15·4
1913	99460	3177	3199	32·16	1811	18·20	107	182	497	155	1886	18·96

TABLE 19.

LOCAL GOVERNMENT BOARD TABLE I.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1913 AND PREVIOUS YEARS.

Year	Population estimated to Middle of each Year.	Births.			Total Deaths Registered in the District.		Transferable Deaths		Net Deaths belonging to the District.			
			Nett.						Under 1 year of age.		At all Ages.	
		Number.	Number.	Rate.	Number.	Rate.	Number of Nonresidents in the District.	Number of Residents in the District.	Number.	Rate.	Number.	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1908	93812	3311	—	32.2	1436	15.3	88	159	404	122	1507	16.0
1909	95161	3050	—	32.0	1707	17.9	93	148	457	149	1762	18.5
1910	96523	3158	—	32.7	1357	14.0	73	123	384	121	1407	14.5
1911	96870	3204	3247	33.5	1707	17.6	83	149	515	158	1773	18.3
1912	98159	3103	3137	31.9	1429	14.5	76	98	389	124	1521	15.4
1913	99460	3177	3199	32.16	1811	18.20	107	182	407	155	1886	18.96

TABLE 20.—STATISTICS FOR ST. HELENS SINCE 1883.

YEARS.	Population.	Birth Rate.	Death Rate.	Zymotic Death Rate.	Infantile Mortality Rate.	Rate of Persons Married.	DEATHS FROM							
							Small Pox.	Measles.	Scarlet Fever	Typhoid Fever.	Typhus Fever.	Diarrhœa.	Whooping Cough.	Diphtheria.
1883	60263	40·69	21·65	2·5	143	—	0	3	14	31	1	69	24	11
1884	61584	42·50	24·16	5·3	173	—	0	131	16	33	2	131	9	11
1885	62932	39·93	23·32	3·5	168	—	0	81	13	7	1	56	53	11
1886	64311	40·70	22·46	5·2	172	—	0	102	34	28	0	122	41	10
1887	65718	37·00	21·69	3·9	163	—	0	53	35	34	0	101	28	11
1888	67158	39·20	19·80	3·1	151	—	0	38	11	22	0	65	61	21
1889	68628	39·86	23·50	4·18	177	—	0	78	3	81	1	85	15	29
1890	70132	38·90	25·43	5·3	170	—	0	19	181	24	1	74	68	13
1891	71509	40·80	26·02	3·0	180	—	0	54	24	26	0	78	29	9
1892	72399	40·2	21·0	2·64	147	—	1	23	18	25	0	84	31	12
1893	73576	41·3	24·4	5·4	196	—	5	135	6	52	0	168	19	16
1894	*76112	37·8	18·3	2·21	161	14·6	0	21	14	26	2	38	61	10
1895	77288	40·9	21·8	3·10	181	13·0	1	54	9	59	0	101	14	8
1896	78482	38·7	20·9	3·73	177	13·2	0	38	59	40	0	63	78	17
1897	79694	40·0	21·8	4·3	181	14·2	0	87	44	33	0	133	33	20
1898	80926	40·3	19·9	3·2	172	14·2	0	17	24	30	0	140	34	16
1899	82176	38·3	20·4	2·9	157	13·0	0	21	8	43	0	114	41	15
1900	83445	37·1	22·8	3·2	188	13·0	0	59	25	19	0	91	56	19
1901	84734	36·9	19·7	2·56	175	13·9	0	7	29	34	0	95	17	3
1902	86043	37·4	19·7	2·60	167	11·4	0	59	52	25	0	50	18	20
1903	87372	39·1	17·5	1·72	138	13·0	0	1	26	18	0	53	30	23
1904	88722	37·4	20·9	3·96	174	12·9	3	131	17	13	0	120	49	22
1905	89843	36·05	17·2	1·88	132	11·7	0	41	16	2	0	66	26	18
1906	91153	33·9	17·3	1·79	159	11·9	0	10	4	18	0	105	5	22
1907	92476	34·1	18·3	2·87	155	13·6	0	145	10	12	0	36	52	11
1908	93812	35·2	16·0	1·32	122	12·3	0	0	29	12	0	59	7	17
1909	95161	32·0	18·5	3·5	149	12·7	0	188	33	13	0	27	62	12
1910	96523	32·7	14·5	1·26	121	13·1	1	15	22	10	0	51	16	7
1911	96870	33·5	18·3	3·03	158	12·7	0	69	13	22	0	143	39	8
1912	98159	31·96	15·5	1·76	124	14·0	0	62	19	8	0	49	46	19
1013	99460	32·16	18·9	3·74	155	14·6	0	189	26	4	0	120	18	15

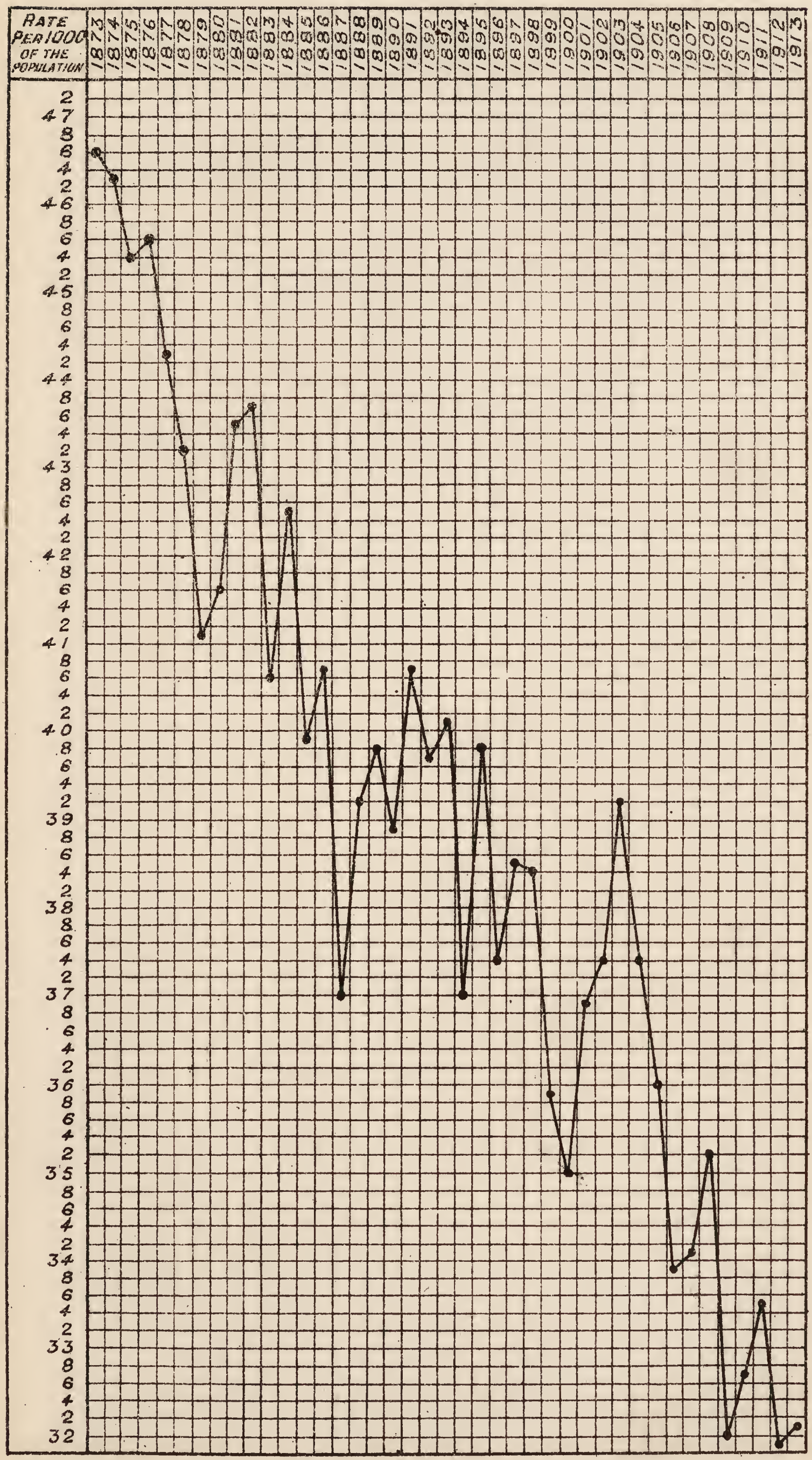
*Borough extended

TABLE 30.—RAINFALL FOR 24 HOURS SUBSEQUENT TO 8 A.M. BETWEEN 24 AND 1881

Station	Rainfall	High Rain	Date	Highest Rainfall in 24 hours	Highest Rainfall in 24 hours to 8 a.m.	Number of days	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Bombay	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcutta	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Madras	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Poona	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Karachi	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Lahore	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Agra	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Allahabad	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcutta	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Madras	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Bombay	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Poona	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Karachi	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Lahore	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Agra	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Allahabad	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcutta	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Madras	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Bombay	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Poona	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Karachi	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Lahore	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Agra	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Allahabad	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcutta	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Madras	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Bombay	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Poona	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Karachi	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Lahore	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Agra	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Allahabad	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcutta	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Madras	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Bombay	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Poona	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Karachi	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Lahore	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Agra	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0
Allahabad	1.00	0.00	1900	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0

TABLE 21

BIRTH RATE — ST HELENS, 1873-1913.



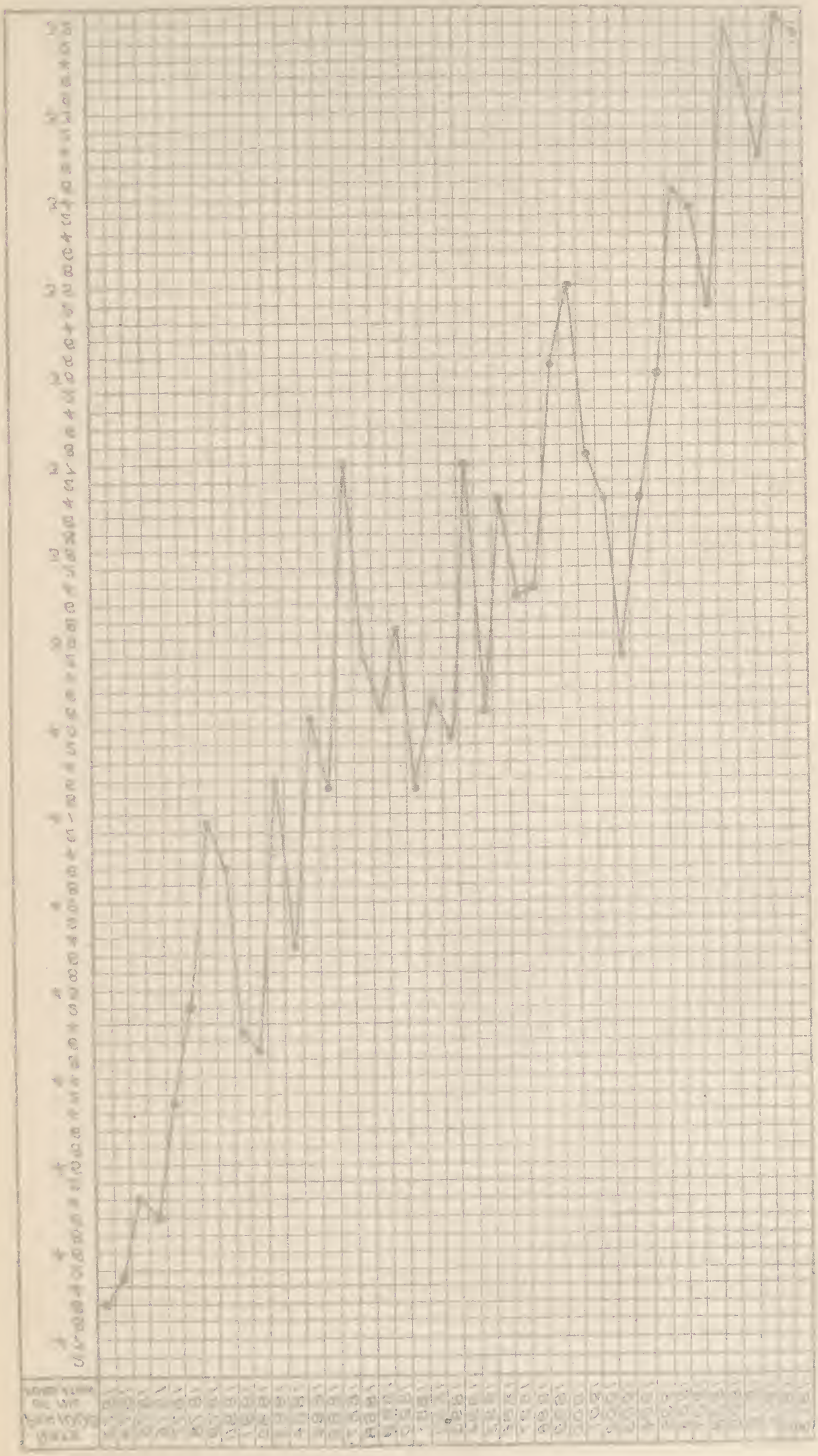
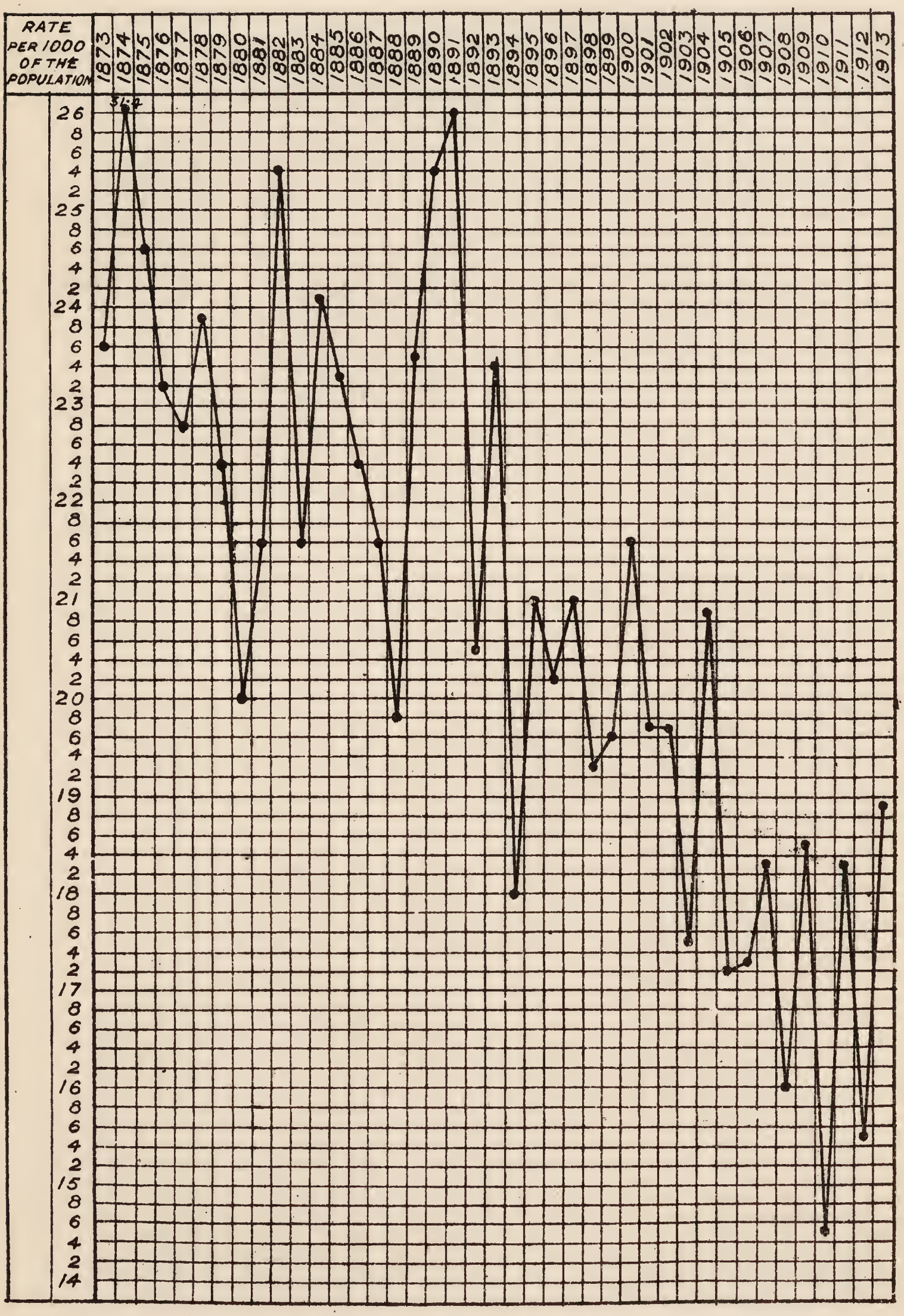


TABLE 22

DEATH RATE.- ST HELENS, 1873-1913.



The death rate is not corrected for age & sex distribution.

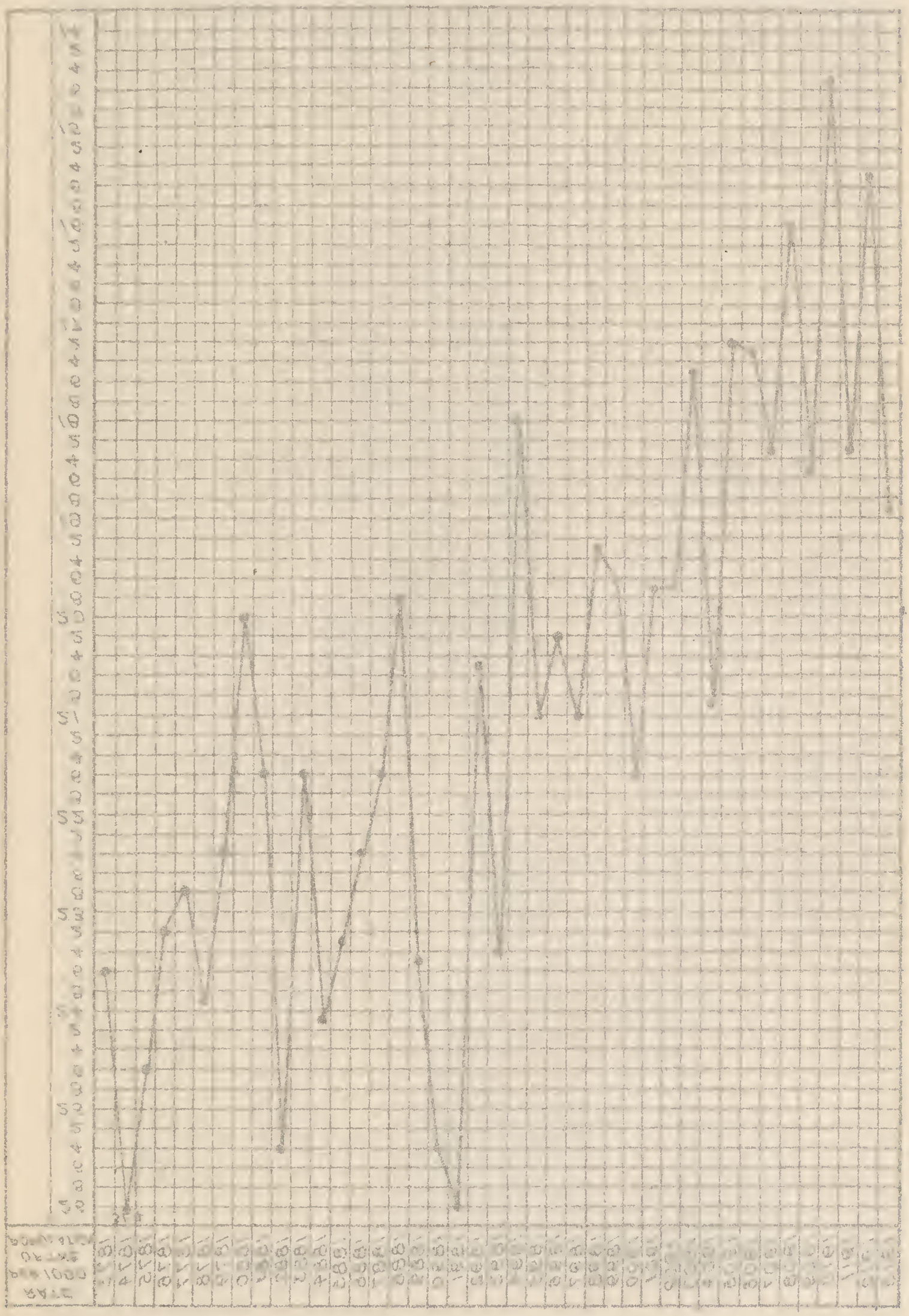

DEATH RATE PER 1000 OF THE POPULATION
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
105
110
115
120
125
130
135
140
145
150
155
160
165
170
175
180
185
190
195
200

TABLE 23.

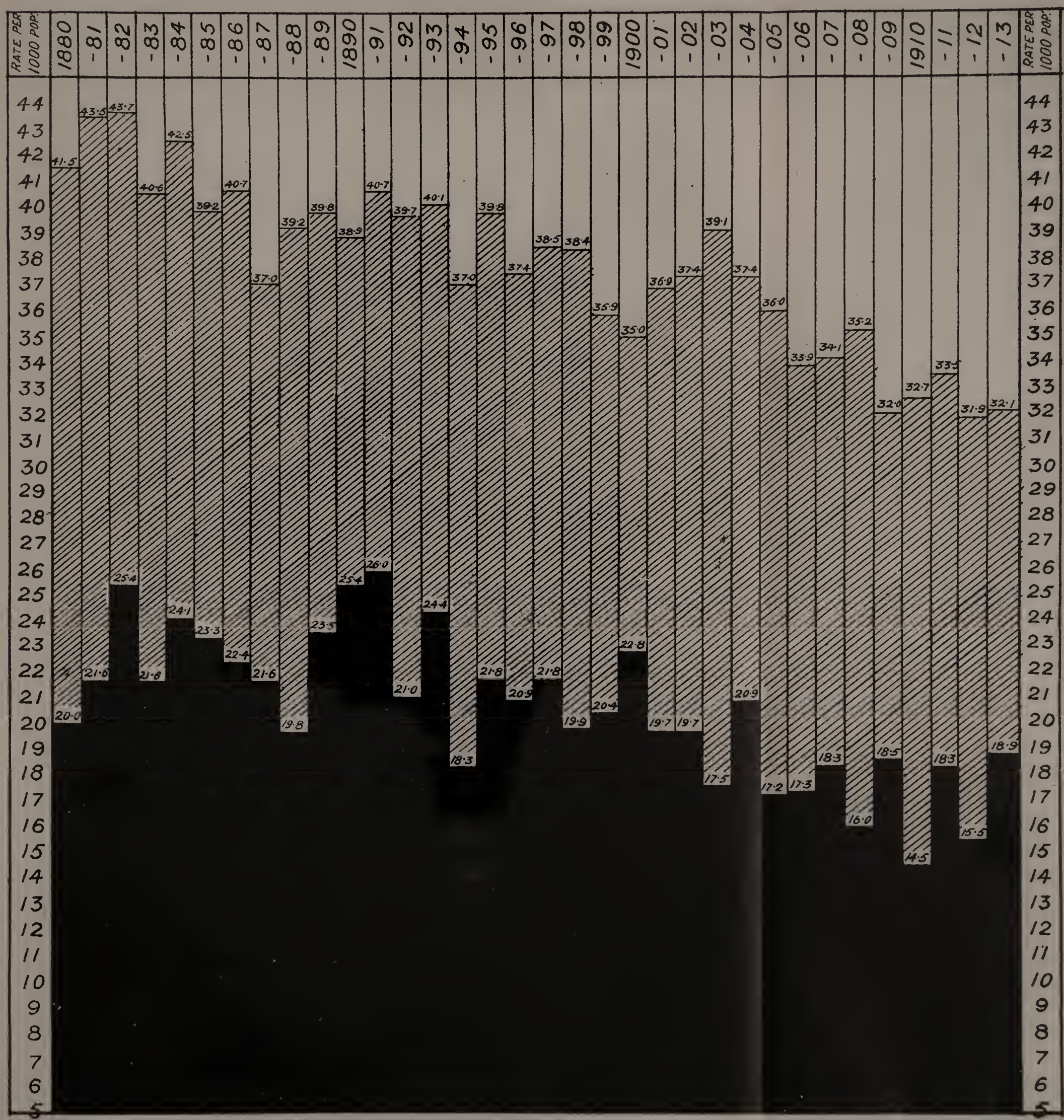
COMPARATIVE STATISTICS OF CERTAIN GREAT TOWNS FOR THE YEAR 1913.

TOWN.	Population.	Birth Rate per 1000.	Death Rate per 1000.	Infantile Death Rate per 1000 Births
96 Great Towns ..	17,852,766	25.1	14.3	116
London	4,518,191	24·8	14·1	104
Birmingham	859,644	27·3	14·7	129
Liverpool	756,553	30·0	17·9	131
Manchester	730,976	25·9	15·6	127
Sheffield	471,662	28·2	15·7	128
Leeds.....	457,295	23·5	15·4	133
Bristol	361,362	22·5	12·6	96
Bradford	290,540	19·6	14·9	127
Hull	287,032	28·0	15·1	125
Newcastle	271,295	27·1	15·0	121
Nottingham	264,735	22·7	14·1	130
Portsmouth	241,256	24·4	12·2	90
Stoke-on-Trent ...	239,284	31·4	18·6	169
Salford.....	233,849	26·6	15·7	136
Leicester	230,970	22·6	13·3	120
Cardiff	186,554	25·9	13·4	115
Bolton	183,879	21·6	15·7	144
Rhondda.....	162,137	33·2	14·0	138
Sunderland	152,377	31·0	17·7	134
Oldham	149,936	23·2	16·8	141
Birkenhead.....	135,557	28·9	14·4	115
Blackburn	133,971	21·8	15·6	148
Middlesborough ..	107,993	31·1	17·6	131
Derby	125,462	23·6	12·5	101
Norwich	123,288	22·0	13·8	115
Swansea	119,485	28·0	14·3	127
Gateshead.....	118,601	29·2	14·4	122
Preston	118,070	23·9	17·0	160
Coventry.....	115,064	26·2	11·7	92
Plymouth	113,083	23·5	15·6	125
Stockport	112,480	23·1	15·3	145
Huddersfield	110,882	19·5	14·5	104
South Shields.....	110,513	30·9	17·5	117
Burnley.....	109,021	22·9	16·5	170
Halifax	100,740	18·8	15·4	101
Wolverhampton ..	95,601	26·5	15·7	130
Walsall	93,477	30·3	16·8	154
Rochdale	93,420	20·6	14·9	108
Wigan	90,763	28·0	18·3	180
Wallasey	84‘476	21·9	11·3	85
York	83,329	23·9	12·4	92
Warrington	74,065	29·4	15·3	130
Bootle	72,186	29·6	17·1	146
Bury	59,159	20·2	15·1	138
ST. HELENS	99,460	32·1	18·9	155

TABLE 33

MAJOR LAND USES RELATED TO CONTRAVENE SALTAVALUCO
SUBE RIVER LITE BOG

BIRTH RATE, DEATH RATE AND RATE OF NATURAL INCREASE. ST. HELENS 1880-1913



The Black portion represents the DEATH RATE.

The Shaded portion represents the RATE OF NATURAL INCREASE, or the excess of the Birth Rate over the Death Rate.

The BIRTH RATE is represented by the shaded portion PLUS the black portion.

The death rates are not corrected for age & sex distribution.

TABLE 25.

LOCAL GOVERNMENT TABLE III.

CAUSES OF, AND AGES AT, DEATH DURING YEAR 1913

Causes of Death.	Nett Deaths at subjoined ages.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.
	All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	
All causes Certified	1827	472	242	167	105	69	175	305	296	289
All causes Uncertified	59	25	2	2	2	—	2	20	6	2
Enteric Fever	4	—	—	—	—	—	3	1	—	6
Small-pox	—	—	—	—	—	—	—	—	—	—
Measles	189	29	77	71	11	1	—	—	—	3
Scarlet Fever	26	—	5	9	12	—	—	—	—	23
Whooping Cough	18	6	11	1	—	—	—	—	—	—
Diphtheria and Croup	15	4	2	6	3	—	—	—	—	8
Influenza	17	1	1	1	3	1	2	5	3	1
Erysipelas	1	1	—	—	—	—	—	—	—	—
Phthisis (Pulmonary Tuberculosis)	100	2	1	2	8	17	45	24	1	38
Tuberculous Meningitis	31	9	7	8	4	2	1	—	—	3
Other Tuberculous Diseases	59	12	14	11	12	7	3	—	—	11
Cancer, malignant disease	73	—	—	—	—	1	10	39	23	7
Rheumatic Fever	8	—	—	—	1	2	2	1	2	—
Meningitis	34	8	9	7	6	2	1	—	1	3
Organic Heart Disease	89	—	—	—	4	2	13	47	23	18
Bronchitis	182	41	15	5	2	—	4	56	59	17
Pneumonia (all forms)	164	43	40	17	8	9	19	16	12	28
Other diseases of Respiratory organs	38	16	7	1	4	—	6	3	1	7
Diarrhœa and Enteritis	120	72	34	9	2	—	—	2	1	1
Appendicitis and Typhlitis	4	—	—	—	—	2	1	1	—	1
Cirrhosis of Liver	6	—	—	—	—	—	—	5	1	—
Alcoholism	3	—	—	—	—	—	3	—	—	—
Nephritis and Bright's Disease	37	2	1	2	1	2	7	15	7	7
Puerperal Fever	—	—	—	—	—	—	—	—	—	—
Other accidents and diseases of Pregnancy and Parturition	9	2	—	—	—	—	7	—	—	—
Congenital Debility and Malformation, including Premature Birth	167	166	1	—	—	—	—	—	—	2
Violent Deaths, excluding Suicide	53	1	5	7	10	4	13	10	3	23
Suicides	7	—	—	—	—	2	2	2	1	1
Other Defined Diseases	400	76	13	8	15	14	30	89	155	78
Diseases ill-defined or unknown	32	6	1	4	1	1	5	9	5	5
	1886	497	244	169	107	69	177	325	298	291
Sub-Entries. included in above figures. Cerebro-spinal Meningitis	0	—	—	—	—	—	—	—	—	—
Poliomyelitis	0	—	—	—	—	—	—	—	—	—
Cerebral Hæmorrhage	56	—	—	—	—	—	—	22	34	4
Senility	103	—	—	—	—	—	—	6	97	2
Pneumonia	87	15	11	9	5	9	17	13	8	12
Venereal Disease	20	3	—	—	—	2	3	11	1	—

TABLE 32

FOOT GOVERNMENT AREA III

CAUSES OF AND AGES AT DEATH DURING YEAR 1931

Causes of Death	All Ages	Under 1 Year	1 and under 5 Years	5 and under 15 Years	15 and under 25 Years	25 and under 35 Years	35 and under 45 Years	45 and under 55 Years	55 and under 65 Years	65 and upwards
Enteric (Typhoid) Fever	—	—	—	—	—	—	—	—	—	—
Paratyphoid Fever	—	—	—	—	—	—	—	—	—	—
Other Bacillary Diseases	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	—	—
Smallpox	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	—	—	—	—	—	—	—	—	—	—
Whooping Cough	17	—	11	1	—	—	—	—	—	—
Diphtheria and Croup	12	4	3	2	2	—	—	—	—	—
Influenza	17	—	1	1	3	1	3	6	2	1
Tuberculosis	1	—	—	—	—	—	—	—	—	—
Pulmonary (Phthisis) Tuberculosis	100	3	1	3	2	11	19	29	4	28
Other Tuberculous Diseases	26	13	10	10	13	1	3	—	—	11
Cancer	21	3	1	2	1	3	3	—	—	8
Cancer, Mouth	27	—	1	1	1	1	10	20	2	1
Cancer, Breast	7	—	—	1	1	—	1	1	1	2
Cancer, Uterus	19	—	—	—	4	3	13	12	2	12
Cancer, Other Forms	99	1	1	2	9	—	4	20	29	13
Diabetes	19	3	3	1	3	1	1	—	1	3
Anæmia	2	—	—	—	1	1	1	1	1	—
Diseases of Blood	4	—	—	—	—	—	—	—	—	4
Meningitis	12	4	3	2	2	—	—	—	—	—
Cerebral Hæmorrhage	17	—	11	1	—	—	—	—	—	—
Heart Disease	32	—	2	3	13	—	—	—	—	14
Aortic	126	30	22	17	11	1	—	—	—	3
Bronchitis	—	—	—	—	—	—	—	—	—	—
Pneumonia (All Forms)	4	—	—	—	—	—	3	1	—	4
Diarrhœa, Under 2 Years	96	32	5	5	5	—	3	20	4	3
All Causes	1251	115	117	102	100	60	122	207	300	250
Cases of Death	Area	Under 1 Year	1 and under 5 Years	5 and under 15 Years	15 and under 25 Years	25 and under 35 Years	35 and under 45 Years	45 and under 55 Years	55 and under 65 Years	65 and upwards
		Ages Persons at Death								

TABLE 26. LOCAL GOVERNMENT BOARD TABLE II.

TABLE SHOWING NEW CASES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH DURING THE YEAR 1913, IN THE ST. HELENS URBAN SANITARY DISTRICT, CLASSIFIED ACCORDING TO DISEASES, AGES, AND LOCALITIES.

Notifiable Disease.	Number of Cases Notified.								Total Cases Notified in each Locality. (*e.g.* Parish or Ward) of the District.									Total cases removed to Hospital.
	At all Ages.	At Ages—Years.																
		Under 1.	1 to 5.	5 to 15.	15 to 25.	25 to 45.	45 to 65	65 and upwards.	North Eccleston.	South Eccleston.	Central.	North Windle.	South Windle.	Hardshaw.	East Sutton.	West Sutton.	Parr.	
Small-pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria (including Membranous croup)	148	7	40	75	16	7	3	..	6	26	4	14	4	22	24	18	30	105
Erysipelas	75	2	1	7	5	32	23	5	8	12	7	3	11	12	5	10	7	3
Scarlet Fever	723	11	200	462	37	11	2	..	96	99	16	98	50	100	80	74	110	599
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	25	..	6	7	4	7	1	..	5	..	1	1	1	..	6	8	3	25
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	4	..	..	..	..	4	..	..	..	1	2	..	..	..	..	1	..	2
Cerebro-spinal Meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	253	..	7	58	45	98	41	4	48	38	28	17	18	25	22	*44	13	87
Other forms of Tuberculosis	164	10	45	77	22	10	..	..	36	21	10	18	16	13	8	16	26	2
Ophthalmia Neonatorum	7	7	..	..	..	..	..	..	2	1	1	1	—	1	—	1	—	—
Totals	1399	37	299	686	129	169	70	9	201	198	69	152	100	173	145	172	189	823

* 33 of these cases were notified from Rainhill Asylum.

TABLE 26. LOCAL GOVERNMENT BOARD TABLE 11.

TABLE SHOWING THE CAUSES OF INFECTIOUS SICKNESS, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH DURING THE YEAR 1907-08, HAVING CLOSE SERVICES WITH SCHOOL, ELSEWHERE, ACCORDING TO NUMBERS, AGES, AND FACILITIES.

Notifiable Disease.	Cases in Each Month.												Total Cases in Each Month.	Cases in Each Ward of the District.											Cases Imported.
	Cases in Each Month.													Cases in Each Ward of the District.											
	At Ages—Years.																								
	0—1	1—2	2—3	3—4	4—5	5—10	10—15	15—20	20—25	25—35	35—45	45—65													
Small pox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria (including Membranous Croup)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Croup	146	7	40	75	16	7	1	..	8	20	8	12	4	26	94	18	30	165
Erysipelas	70	2	4	2	3	24	2	3	2	12	7	3	11	12	5	10	7	3
Scarlet Fever	727	11	320	265	67	11	3	..	60	108	40	66	39	100	40	74	124	360
Typhus Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteric Fever	20	..	6	7	4	2	1	..	4	7	2	1	1	..	6	8	3	26
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Continued Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever	4	..	..	..	..	..	4	..	..	1	2	..	..	..	..	2	..	2
Cerebro-spinal Meningitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Influenza	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	300	..	7	36	44	66	61	4	40	98	45	16	20	26	28	*46	13	67
Other forms of Tuberculosis	146	10	40	77	23	10	..	..	26	41	10	18	26	14	8	15	26	2
Cerebro-spinal Meningitis	7	7	..	..	..	..	..	..	2	2	2	—	—	2	—	1	—	—
Total	1,520	37	320	466	157	120	70	7	202	195	80	125	100	178	124	172	199	624

* 35 of these cases were notified from Country Districts.

TABLE 27. LOCAL GOVERNMENT BOARD TABLE IV.

INFANTILE MORTALITY DURING THE YEAR, 1913.

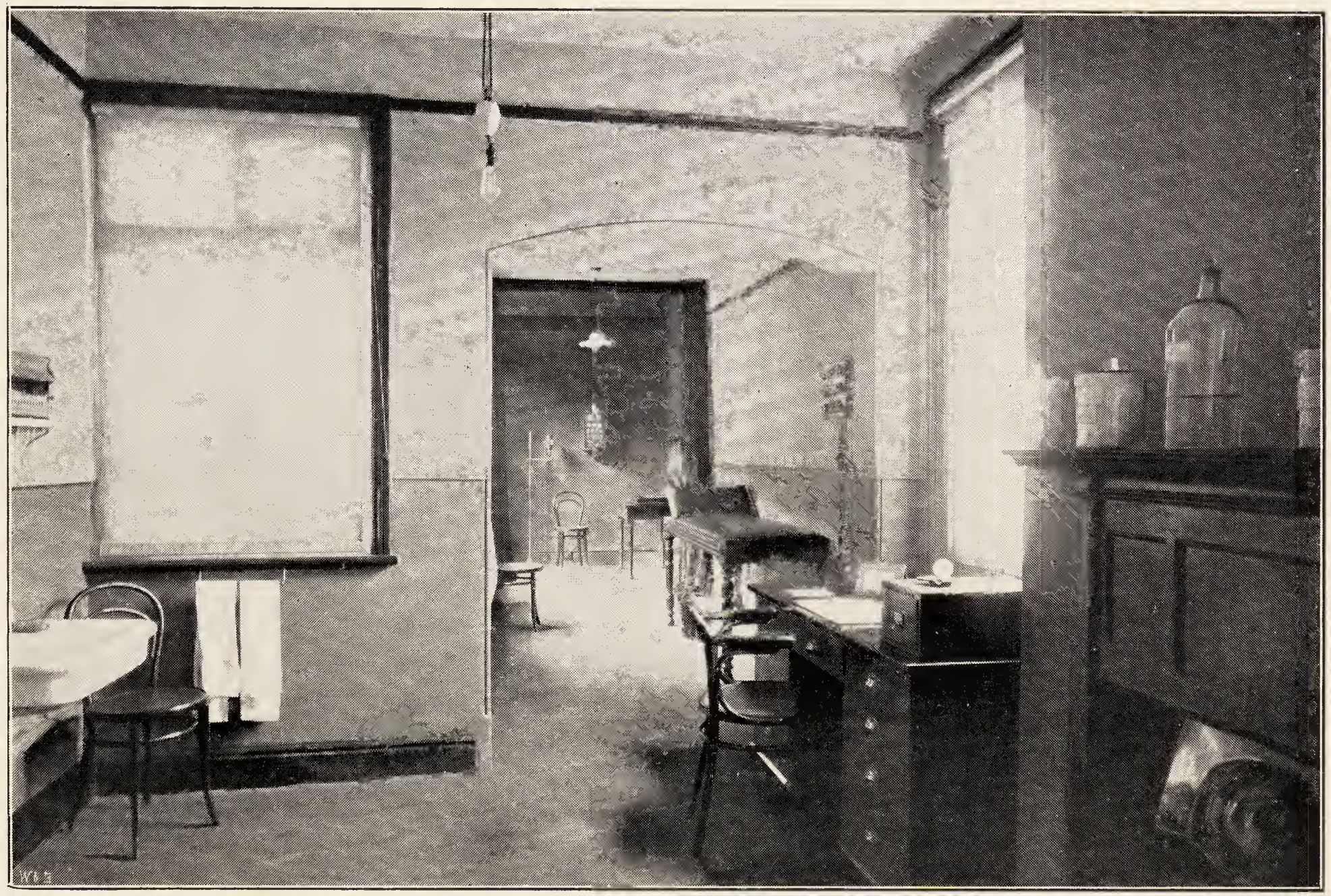
Deaths from stated Causes in Weeks and Months under One Year of Age.

CAUSES OF DEATH.	UNDER 1 WEEK.	1-2 WEEKS.	2-3 WEEKS.	3-4 WEEKS.	TOTAL UNDER 1 MONTH	1-3 MONTHS.	3-6 MONTHS.	6-9 MONTHS.	9-12 MONTHS.	Total Deaths under 1 year.
All causes { Certified ...	82	21	8	17	128	86	96	69	93	472
All causes { Uncertified	18	—	—	—	18	3	2	1	1	25
Small-pox	—	—	—	—	—	—	—	—	—	—
Chicken-pox	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	1	2	8	18	29
Scarlet fever	—	—	—	—	—	—	—	—	—	—
Whooping-Cough.....	—	—	—	—	—	—	3	2	1	6
Diphtheria and Croup ...	—	—	—	—	—	—	1	2	1	4
Erysipelas.....	—	—	—	—	—	—	—	1	—	1
Tuberculous Meningitis ...	—	—	—	—	—	1	2	3	3	9
Abdominal Tuberculosis..	—	—	—	—	—	3	2	—	6	11
Other Tuberculous Dis'ses.	—	—	—	—	—	—	—	1	2	3
Meningitis (*not Tuber'lo's*)	—	—	—	—	—	2	1	4	1	8
Convulsions	9	6	1	3	19	11	5	3	3	41
Laryngitis.....	—	—	—	—	—	—	—	—	—	—
Bronchitis.....	—	—	—	—	—	10	12	9	10	41
Pneumonia (all forms)...	—	—	1	2	3	4	11	5	20	43
Diarrhœa	—	—	—	—	—	9	16	6	8	39
Enteritis	—	—	1	—	1	5	12	7	8	33
Gastritis	—	—	—	1	1	1	4	2	2	10
Syphilis.....	2	—	—	1	3	—	—	—	—	3
Rickets	—	—	—	—	—	—	—	—	1	1
Suffocation, overlying ...	—	—	—	—	—	—	—	—	—	—
Injury at birth	2	—	—	—	2	—	—	—	—	2
Atelectasis	5	1	1	—	7	—	—	—	—	7
Congenital Malformations	3	3	—	—	6	1	—	—	—	7
Premature birth	67	9	4	5	85	19	5	2	1	112
Atrophy, Debility and Marasmus	7	—	—	2	9	16	16	4	2	47
Other Causes	5	2	—	3	10	6	6	11	7	40
	100	21	8	17	146	89	98	70	94	497

Nett Births in the year—legitimate 3,103 illegitimate 96

Nett Deaths in the year—legitimate 460 illegitimate 37

[illegible]	2	3	—	3	10	8	2	11	1	9
[illegible]	5	—	—	5	3	10	10	1	7	31
[illegible]										
[illegible]	85	8	3	2	99	10	7	7	1	115
[illegible]	3	2	—	—	5	1	—	2	—	1
[illegible]	2	1	1	—	4	—	—	—	—	1
[illegible]	3	—	—	—	3	—	—	—	—	3
[illegible]	—	—	—	—	—	—	—	—	—	—
[illegible]	—	—	—	—	—	—	—	—	1	1
[illegible]	3	—	—	1	—	—	—	—	—	1
[illegible]	—	—	—	1	1	1	1	3	7	10
[illegible]	—	—	1	—	1	2	17	3	3	29
[illegible]	—	—	—	—	—	3	12	8	4	24
[illegible]	—	—	1	3	3	1	21	7	30	72
[illegible]	—	—	—	—	—	10	17	6	10	41
[illegible]	—	—	—	—	—	—	—	—	—	—
[illegible]	6	6	1	2	14	12	8	3	2	41
[illegible]	—	—	—	—	—	3	1	1	1	6
[illegible]	—	—	—	—	—	—	—	1	2	3
[illegible]	—	—	—	—	—	1	2	2	2	8
[illegible]	—	—	—	—	—	—	—	1	—	1
[illegible]	—	—	—	—	—	1	1	1	1	4
[illegible]	—	—	—	—	—	—	2	2	1	6
[illegible]	—	—	—	—	—	—	—	—	—	—
[illegible]	—	—	—	—	—	1	3	2	10	26
[illegible]	—	—	—	—	—	—	—	—	—	—
[illegible]	—	—	—	—	—	—	—	—	—	—
All causes	Continued	18	—	—	—	18	2	2	1	1	20
	Completed	85	31	8	11	135	80	60	50	50	315
Causes of death	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



School Clinic.—Ophthalmic Surgeons' Consulting Room.

SCHOOL HYGIENE.

TO THE CHAIRMAN AND MEMBERS
OF THE EDUCATION COMMITTEE.

Ladies and Gentlemen,

I beg to submit the following report, which deals with the work of medical inspection, treatment and following-up of children attending the elementary schools, carried out during the year under the general direction of your medical officer.

There are grounds for satisfaction in knowing that the requirements of the Board of Education have been complied with, and that a comprehensive scheme, leading to the establishment of a school clinic, has been instituted. The need for certain special schools to provide accommodation for children unable to benefit by attending at an ordinary elementary school is still existant.

I have pleasure in acknowledging the cordial co-operation of the Secretary for Education.

I am, Ladies and Gentlemen,

Your obedient servant,

JOSEPH CATES.

March 18*th*, 1914.

The Sanitary Condition of the Schools.

"General review of the hygienic conditions prevalent in the schools in the area of the Local Education Authority in respect of such matters as surroundings, ventilation, lighting, warming, equipment, and sanitation, including observations on the type and conditions of sanitary conveniences and lavatories, water supply for washing and drinking purposes, the cleanliness of schoolrooms and cloakrooms, arrangements for drying children's cloaks and boots, and the relation of the general arrangements of the school to the health of the children."

At the beginning of 1913 there were in the borough under the control of the Education Committee 38 schools with 80 departments. Six were provided schools and 32 non-provided. There was accommodation for 22,290 children, 20,220 being on the roll, with an average attendance of 18,348.

At the end of the year the number on the roll was 20,194, and the average attendance 18,051.

The number of children under five years of age attending school in December was 878.

As regards site, surroundings and general sanitation, the schools vary considerably, the newer will bear comparison with any of a similar size; on the other hand some of the older schools are in most respects very undesirable. A complete inspection will be made of each school, and the reports, together with suitable recommendations, placed before the Education Committee. As each school will be dealt with in turn, it will suffice on this occasion to refer briefly in general terms to one or two matters. The schools are provided with water from the public supply for drinking and washing purposes. A form of drinking fountain satisfactory for school children has yet to be devised.

The cloakroom arrangements, even in the more modern schools, are not perfect, and doubtless assist in the spread of contagious disease. In the older buildings a passage is often used for hanging clothes.

Unfortunately trough closets are common in the older schools in the borough; both from an educational and hygienic point of view this type of convenience should be replaced by separate pedestal water-closets.

Arrangements for Medical Inspection.

"General description of the arrangements which have been made for the co-relation of the School Medical Service with the Public Health Service, and for the organisation and supervision of medical inspection, and an account of the methods of inspection adopted."

CO-RELATION OF THE SERVICES.

The school medical officer is medical officer of health, and the assistant medical officers of health are assistant school medical officers. The nurses on the medical officer's staff devote a portion of their time to duties connected with the Notification of Births Act and the inspection of midwives. There is, therefore, intimate co-ordination of the two services. The actual inspection is mainly carried out by the assistant school medical officer, assisted by the school nurses. The clerical work, which is considerable in amount, is performed by the clerks of the medical officer's department.

Method of Inspection.

About a month before the inspection of a school, a letter is sent to the head teacher, together with appropriate forms, asking for the names and certain other information concerning children that (1) have entered school for the first time since the previous inspection; (2) are seven years of age; (3) are twelve years of age; (4) appear to the teacher to be mentally or physically abnormal, or neglected.

As soon as these forms are returned to the office, they are compared with the records of inspection, and for each child who has not been previously examined a new card is made out by the teachers. The nurse then visits the school and arranges with the head teacher the details for the inspection. An invitation to attend at the examination is issued to the parents of each child. The weighing and measuring is carried out by a nurse, who also records certain other particulars. This preliminary work is done at the actual medical inspection, which always takes place during school hours on school premises.

School Arrangements.

A weighing machine and height standard has to be taken to the various schools; this is unsatisfactory and must, to some extent, interfere with the accuracy of the apparatus.

Derangement of school work, arising from medical inspection, is very slight. A class-room or teachers' room is generally used for the examination.

Attendance of Parents.

About 39 per cent. of the parents accepted the invitation to be present at the examination of their children.

When medical inspection of children attending the elementary schools was first started throughout this country it was generally felt that every endeavour should be made to encourage parents to attend at the time of the examination: the reason for this was two-fold. In the first place it was hoped that the presence of the parents would dispel the rumours which had arisen concerning the extent of the inspection, and would tend to make them sympathetically inclined to the innovation. Secondly, it was intended that advice should be given to the parents by the medical inspector when children were found to be suffering from various defects. The position is now changed, medical inspection is no longer a novelty. In well organised areas school nurses follow up each case of defect, giving advice and encouraging the parents to seek the necessary treatment. Moreover, experience has shown that an invitation to some parents not unfrequently defeats the aim of inspection. Either the children come "prepared" washed and dressed in their best clothes, or the very children it is most desirable to examine—that is, the dirty, ill-cared-for, and neglected—are kept away on the date of the inspection.

Co-operation of School Officers.

The teachers without exception afford all the help in their power, many of them are enthusiastic in the work. Teachers possess a mine of valuable information concerning the capabilities and environment of the children entrusted to their charge, and the school medical officer is glad to have this opportunity of expressing his appreciation of their ready assistance.

The school attendance officers do not take part in the actual inspection. They however render material aid by making out a weekly return of children who are absent from school on alleged medical grounds and who do not produce a satisfactory medical certificate, by reporting cases of infectious disease and by tracing children who have moved to other districts in the borough. They also make an inquiry into the financial circumstances of parents of children treated at the clinic and collect the allocated payments.

General statement of the extent and scope of the medical inspection carried out during the year, including—

(1) *The number of visits paid to schools and departments;*

(2) *The principle on which children have been selected for inspection;*

(3) *The number of children inspected (classified for age at date of inspection and for sex) ;*

(4) *The number of children referred for subsequent or further examination ;*

(5) *The number of children in respect of whom directions were given for treatment of defects, including a classified statement of such defects ;*

(6) *The average time per head occupied by inspection.*

(1) THE FOLLOWING VISITS WERE MADE DURING THE YEAR :—

By the school medical officers—

To schools and departments 205

To the homes of children 30

By the school nurses—

To schools and departments 630

To the homes of children 4518

(2) THE PRINCIPLE ON WHICH CHILDREN HAVE BEEN SELECTED FOR INSPECTION.

As required by the Board of Education, two groups of children have been examined, namely, those entering and those leaving school during the past year a third group—those seven years of age—has also been inspected.

(3) THE CLASSIFICATION OF THE CHILDREN EXAMINED IS AS FOLLOWS :—

	Number examined.	Estimated number for examination.
Entrants	2041	2000
Intermediates...	2114	2200
Leavers	1857	1900
TOTAL	6012	6100

(4) The name of every child suffering from a defect of sufficient importance to be brought to the notice of the parents, is entered on a special card and filed for the following up and re-examination. If, at the time of medical inspection, the case appears suitable for immediate attention at the clinic, arrangements are made for the necessary treatment. With this exception every case is followed up by the school nurses, who encourage the parents to obtain medical advice or, where the home circumstances warrant it arrange for attendance at the clinic. After treatment a re-examination is made by the school medical officers on the occasion of their next visit to the school attended by the child.

The table following shows the number of serious defects found in systematic and special examinations, and brought to the notice of the parents.

(5) The Defects in respect of which Directions were given for Treatment, were :—

	Routine cases.	Per-centage.	Special cases.	Per-centage.
Number of children examined	6012	—	152	—
Number recommended for treatment	791	13·1	104	68·4
Defects requiring treatment—				
Enlarged tonsils	280	4·66	13	8·55
Adenoids.....	172	2·86	17	11·18
Other throat and nose defects	54	0·9	2	1·31
Defective eyesight	220	3·65	53	34·86
Squint	98	1·63	13	8·55
External eye disease	53	0·9	10	6·59
Discharging ears	65	1·08	5	3·29
Deafness	3	0.05	6	4·00
Heart disease	2	0·03	—	—
Anæmia	45	0·74	1	0·65
Bronchitis.....	3	0·05	—	—
Suspected phthisis	27	0·44	1	0·65
Diseases of nervous system	2	0·03	2	1·31
Tuberculosis	3	0·05	—	—
Ringworm	17	0·30	1	0·65
Scabies	3	0·05	—	
Badly fitting and unsuitable spectacles	13	0·21	4	2·62
Other diseases or defects...	13	0·21	5	3·29
	1073	17·8	133	87·5

(6) The average time per head occupied by inspection.

The average time taken to inspect each child was about five minutes.

(*a*) Re-examination in the Schools by the Medical Officers.

On re-visiting a school, all children found defective at the previous visit, except those suffering from decayed teeth, unclean heads, and those at the time excluded owing to infectious disease, are now re-examined.

"General review of the facts disclosed by medical inspection under the heading contained in the Schedule to Circular 582, *including tables showing the height and weight of children inspected* (*according to age at date of inspection and sex.*)

PERSONAL HISTORY.

The following shows the extent to which the children examined were stated to have suffered from the more common infectious diseases :—

	Number of cases inquired into.	Number of cases which have not had an infectious disease.	PREVIOUS ILLNESSES				
			Measles.	Whooping Cough.	Chicken Pox	Scarlet Fever	Diph-theria
Entrants	1063	119	878	259	169	112	20
Percentage ...		11·1	82·5	24·3	15·8	10·5	1·8
Intermediates...	883	56	768	311	177	156	25
Percentage ...		6·3	86·5	35·2	20·0	17·6	2·8
Leavers	449	48	383	100	69	104	18
Percentage ...		10·6	85·3	22·2	15·3	23·1	4·0

HEIGHTS AND WEIGHTS.

The average heights and weights of all the children systematically examined during the year is given in the following tables, and as a comparison the figures obtained as a result of the examination of about half-a-million children.

AVERAGE HEIGHT AND WEIGHT.

		St. Helens.		Average standard of Anthropometric Committee.	
		Height in inches.	Weight in pounds	Height in inches.	Weight in pounds.
5 years.	Boys	40·0	38·5	41·0	39·9
	Girls	39·7	40·3	40·8	39·6
7 years.	Boys	44·4	45·9	45·9	49·7
	Girls	44·1	45·0	44·4	47·5
12 years.	Boys	53·4	69·7	55·0	76·7
	Girls	53·4	68·9	55·6	76·4

The children are weighed and measured in their ordinary indoor clothing without boots or shoes. As regards the weights some degree of error is bound to arise from the machine used and from the varying amount of clothes worn.

NUTRITION.

The estimation of the state of nutrition of a child is perhaps the most difficult and at the same time the most important observation the medical inspector is called upon to make. In considering the question there is to be taken into account the relationship between the height and weight of the child, its general demeanour, the texture of the muscles, and the appearance of the skin. A well nourished child has height and weight in normal proportion, an alert carriage, firm muscles, with a due covering of fat, and a healthy elastic condition of the skin.

Malnutrition is one of the most serious physical defects from which a child can suffer. Serious in itself as a frequent index of constitutional weakness or disease, it not uncommonly betokens parental ignorance and unhygienic conditions in the home.

Defective nutrition doubtless depends on many factors, but it is safe to assert that in the vast majority of cases the causes are preventible. Chief among them appear to be :—

(1) Insufficient food and sleep.

(2) Unhealthy home surroundings and overcrowding.

(3) Improper food.

The state of nutrition of every child systematically examined has been recorded, and although it was not found possible to follow up each case of malnutrition, yet the attention of the parents was generally drawn to the condition.

In classifying the results the children were divided into three groups :—

(1) Good.—Children whose nutrition was in every way satisfactory.

(2) Fair.—Children showing no well marked sign of malnutrition, but lacking in some respect the essentials of the first group.

(3) Bad.—Children concerning whose malnutrition there could be no question.

The following table shows the percentage of children in the various classes :—

	Number of Children Examined.	GOOD.		FAIR.		BAD.	
		Number	Percentage	Number	Percentage	Number	Percentage
Entrants	2041	1026	50·3	658	32·2	357	17·5
Intermediates...	2114	864	40·8	620	29·4	630	29·8
Leavers	1857	649	34·9	508	27·4	700	37·7
	6012	2539	42·0	1786	29·7	1687	283

For practical purposes the important feature is the large number of children badly nourished.

Clothing and Footgear.

Notice was taken at the time of examination of the state of clothing and footgear.

The following table shows the percentage of children whose clothing or footgear was insufficient or unsatisfactory.

	Number of children examined.	Number with insufficient or unsatisfact'ry clothing and footwear.	Number wearing boots.	Number wearing clogs.	Number with bare feet.
Entrants	2041	93	981	1055	5
Intermediates.....	2114	78	943	1169	2
Leavers	1857	38	900	954	3
Total	6012	209	2824	3178	10
Percentage.....	—	3·4	46·9	53·0	0·1

The condition of the clothing often affords useful evidence of parental care or neglect. The value which might attach to this point is diminished by the notice of inspection sent to the parents. However, it is safe to assert that a parent who knowing the date of the examination, allows a child to wear dirty underclothing is unlikely to be less neglectful in other matters.

There is among parents generally a vast amount of ignorance concerning the hygienic value of the different kinds of clothing. A child, subject each winter to bronchitis, is usually wrapt in three or four layers of woollen material and as soon as cold weather comes has in addition a jersey, wollen muffler, and overcoat, as a result the respirations are further restricted, free movements of the limbs are hampered, the skin is always

moist, and the child, oppressed by the weight of clothing, becomes anæmic and flabby ; in addition "cold air" is carefully shut out from the bedroom, the lungs are weakened and the bronchitis becomes more marked. This process of muffling up is responsible for a large amount of the bronchitis found in young children. A course of instruction to mothers and senior girls on the subject would lead to some improvement.

CLEANLINESS OF THE HEAD.

Three classifications were made :—

(1) Clean—a clean scalp without or with only a few nits.

(2) Dirty—a dirty scalp without nits.

(3) Verminous—all cases with many nits or any vermin, irrespective of cleanliness of scalp.

Among 6,012 children systematically examined, the results were as follows :—

		Number examined.	CLEAN		DIRTY		VERMINOUS	
			Number	Per-centage	Number	Per-centage	Number	Per-centage
Entrants,	Boys...	1040	969	93·2	12	1·1	59	5·7
	Girls...	1001	644	64·3	4	0·4	353	35·3
Intermediate	Boys...	1096	1008	92·0	20	1·8	68	6·2
	Girls...	1018	576	56·6	2	0·2	440	43·2
Leavers,	Boys...	1004	934	93·2	8	0·7	62	6·1
	Girls...	853	499	58·5	—	—	354	41·5
		6012	4630	77·1	46	0·7	1336	22·2

Ample powers are possessed to deal with cases persistently verminous, either by compulsory cleansing or by proceedings under school attendance by-laws after exclusion from school. During the year, 8 children were cleansed by the Authority.

CLEANLINESS OF THE BODY.

Evidence of body vermin was discovered in 4·9 per cent of the children systematically examined. The following table shows the extent to which the bodies were found to be dirty or verminous.

	Number Examined	CLEAN		DIRTY		VERMINOUS	
		Number	Per-centage	Number	Per-centage	Number	Per-centage
Entrants	2041	1906	93·4	10	0·5	125	6·1
Intermediates.....	2114	2003	94·8	26	1·2	85	4·0
Leavers	1857	1748	94·1	21	1·1	88	4·7
Total	6012	5657	94·2	57	0·9	298	4·9

As all the parents were given notice of the date of inspection it must be assumed that the condition was due to neglect.

TEETH.

Decayed teeth is the most common defect found among school children. The extent of the condition is well shown in the following table :—

	Number examined	All Sound		Less than 4 decayed		More than 4 decayed	
		Number	Per-centage	Number	Per-centage	Number	Per-centage
Entrants	2041	280	13·7	877	43·0	884	43·3
Intermediates	2114	158	7·5	705	33·3	1251	59·2
Leavers	1857	154	8·3	853	45·9	850	45·8
	6012	592	9·8	2435	40·5	2985	49·7

It is certain that these figures under estimate the extent of the decay ; more careful examination of the mouth with a dental mirror and probe would probably show that considerably over 90 per cent. of the children have unsound teeth.

The question of the treatment of dental disease must be approached from several sides. Preventive treatment should be looked at before the child comes under the care of the Local Education Authority. There is general agreement that the chief underlying cause of dental caries is damage done to the developing teeth, both the temporary and permanent sets, by unsuitable foods and injudicious methods of feeding, especially during the first years of life. The work of the Sanitary Authority in the homes in connection with the prevention of infant mortality may be expected to yield valuable aid in effecting improvements in this direction. The daily cleansing of the mouth should be inculcated from infancy upwards, for though it is true that an unclean condition of the mouth may be seen associated with teeth which are perfectly sound, yet in those children predisposed to dental caries the development of the disease will be retarded in proportion as the mouth is kept clean."*

NOSE AND THROAT.

The defect commonly met with consists of enlargement of the tonsils, and adenoids, frequently associated with mouth breathing. The condition is a serious one likely to lead to far-reaching ill-effects, such as deafness, malformations of the nose and throat, bronchitis, deformity of the chest, and general weakness, with predisposition to infectious disease. It is often stated that the child will "grow out of the condition." To some extent this may be true, but by the time it has occurred incalculable injury may have been done to the physical and mental development of the child.

*Annual Report for 1911, by Sir George Newman, Medical Officer to the Board of Education.

The treatment of the condition is preventive and curative. Fresh air, breathing exercises, improvement of the health and local applications will in slight cases often effect a cure. For the remainder a simple operation is necessary ; it is essential that after-care should be given in order that a proper method of breathing may be acquired, but instruction alone, however well given is not sufficient ; ample food, rest and open-air treatment is required, in a word, attendance at an open-air school.

The accompanying table gives the percentage of children suffering from defects of the nose and throat.

	Entrants		Intermediates		Leavers		Total	
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage
Enlarged tonsils .	191	9·3	187	8·8	160	8·6	538	8·9
Adenoids.....	50	2·4	60	2·8	46	2·4	156	2·5
Nasal obstruction	28	1·3	31	1·4	13	0·7	72	1·1
Mouth breathing..	96	4·7	166	7·8	83	4·4	345	5·7
Deflected septum.	3	0·1	6	0·2	10	0·5	19	0·2
Rhinorrhœa	11	0·5	9	0·4	1	—	21	0·3
Tonsilitis.....	4	0·1	3	0·1	1	—	8	0·1
Other diseases or defects.....	2	—	5	0·2	6	0·3	13	0·2
Total	385	18·4	467	21·7	320	16·9	1172	19·0

Chronic Nasal Catarrh.

In many of the infants examined, and in a proportion of the seniors, a considerable amount of rhinitis was present. Few infants possess a pocket handkerchief, and practically none knows how to use it. A course of pocket handkerchief drill throughout the schools would do much to prevent this ailment.

Glandular Enlargements.

The lymphatic glands situated about the head and neck not infrequently show signs of enlargements. This is generally due to some chronic infection of the mouth, throat, or scalp.

Treatment must be both local and general ; the former includes the removal of the source of infection, decayed teeth, enlarged tonsils, and verminous condition of the scalp. General measures comprise the inculcation of a higher standard of personal cleanliness, and improvements in the hygiene of the home and of the school.

The following table shows the extent of the disease among 6,012 children.

	Entrants		Intermediates		Leavers		Total	
	Cases	Per-centage	Cases	Per-centage	Cases	Per-centage	Cases	Per-centage
Enlarged glands	493	8·2	576	9·5	333	5·54	1402	23·2
Suppurating glands	–	–	3	0·1	–	–	3	0·1
Gland scars	–	–	3	0·1	4	0·1	7	0·2
Total	493	8·2	582	9·7	337	5·6	1412	23·5

Eye Disease and Defective Vision.

Disease of the external eye usually takes the form of sore eyelids or inflammation of the conjunctiva or cornea. The more common ailment, sore eyelids, is a condition frequently associated with proverty and neglect. The daily use of a simple ointment, fresh air, and ample food will in the majority of instances, soon effect a cure, yet it is not uncommon to see these cases drag along for months and even years until permanent damage to the sight has resulted.

The following table shows the extent of disease and defects of the eyes in the children examined.

	ENTRANTS		INTERMEDIATES		LEAVERS	
	Number	Per-centage	Number	Per-centage	Number	Per-centage
Defective vision	(Entrants not examined for defective vision.		88	4·1	226	12·1
Blepharitis	21	1·0	13	0·6	11	0·5
Conjunctivitis	14	0·6	13	0·6	4	0·2
Opacities, ulcers and other diseases	58	2·9	66	3·3	62	3·3
	93	4·5	180	8·6	303	16·1

Squints	98
Badly fitting spectacles.....	5
Unsuitable spectacles	8
Enucleation of eye	2
Ptosis	1

Deafness and Ear Discharge.

The following table shows the percentage of children suffering from well marked deafness or ear discharge; conditions likely to impose a serious hindrance on the educational progress of a child.

	Entrants		Intermediates		Leavers		Total	
	Number	Per-centage	Number	Per-centage	Number	Per-centage	Number	Per-centage
Deafness	2	0.1	3	0.1	7	0.3	12	0.2
Ear discharge	31	1.5	32	1.5	11	0.5	74	1.2
Total	33	1.6	35	1.6	18	0.8	86	1.4

Ear discharge is often closely related to deafness. An attack of measles or scarlet fever in a child who suffers from enlarged tonsils and adenoids not unfrequently is the origin of ear discharge which may last for years. The reason for the chronicity of the complaint is two fold; in the first place to effect a cure, removal of the tonsils and adenoids is often necessary, and secondly persistent daily treatment by syringing must be carried out. The disease is a serious one, not only entailing danger to the life of the child, and risk of permanent deafness, but inflicting unnecessary inconvenience upon other children in the class owing to the offensive nature of the discharge; some cases are definitely infectious.

The percentage of children examined suffering from ear discharge is given in the following table.

Entrants	1.5
Intermediates.....	1.5
Leavers	0.5

The above figures are certainly an under estimate, as in some cases the discharge is intermittent, and might therefore not be discovered at the time of inspection.

Speech.

A defect of speech was present in 0.3 per cent. of the children examined, the usual defect was stammering.

Most cases of defective speech can be improved and many cured by appropriate treatment; a special class for children suffering from this condition would be likely to yield good results.

Mental and Nervous Disease.

The following is a record of children found to be suffering from mental defect or disease of the nervous system.

	Entrants	Inter-mediates	Leavers	Total
Mentally dull	6	8	12	26
Mentally deficient.	4	4	—	8
Epilepsy	—	1	1	2
Chorea.....	—	1	—	1
Infantile paralysis	3	2	4	9
Facial paralysis...	2	2	—	4
Other diseases	—	3	1	4
	15	21	18	54

Heart and Circulation.

Of the children inspected, 0·18 per cent. were found to be suffering from organic disease of the heart, this condition in children is almost always due to attacks of rheumatism or rheumatic fever. Unfortunately the symptoms are generally insidious, sore throats, "growing pains," headache, and feverishness, frequently overlooked by the parents or treated as a trivial ailment. Close allied to rheumatic fever is chorea or St. Vitus' dance, a disease equally important as regards the serious effect it may have upon the heart. Children suspected suffering from rheumatism in any of its various manifestations require special care and supervision at school, and are particularly suitable for the attendance at an open air school or similar institution.

TUBERCULOSIS.

Pulmonary Tuberculosis.

Among 6,012 children systematically examined, 6 instances of the disease were discovered, and 27 had signs suggestive of the disease.

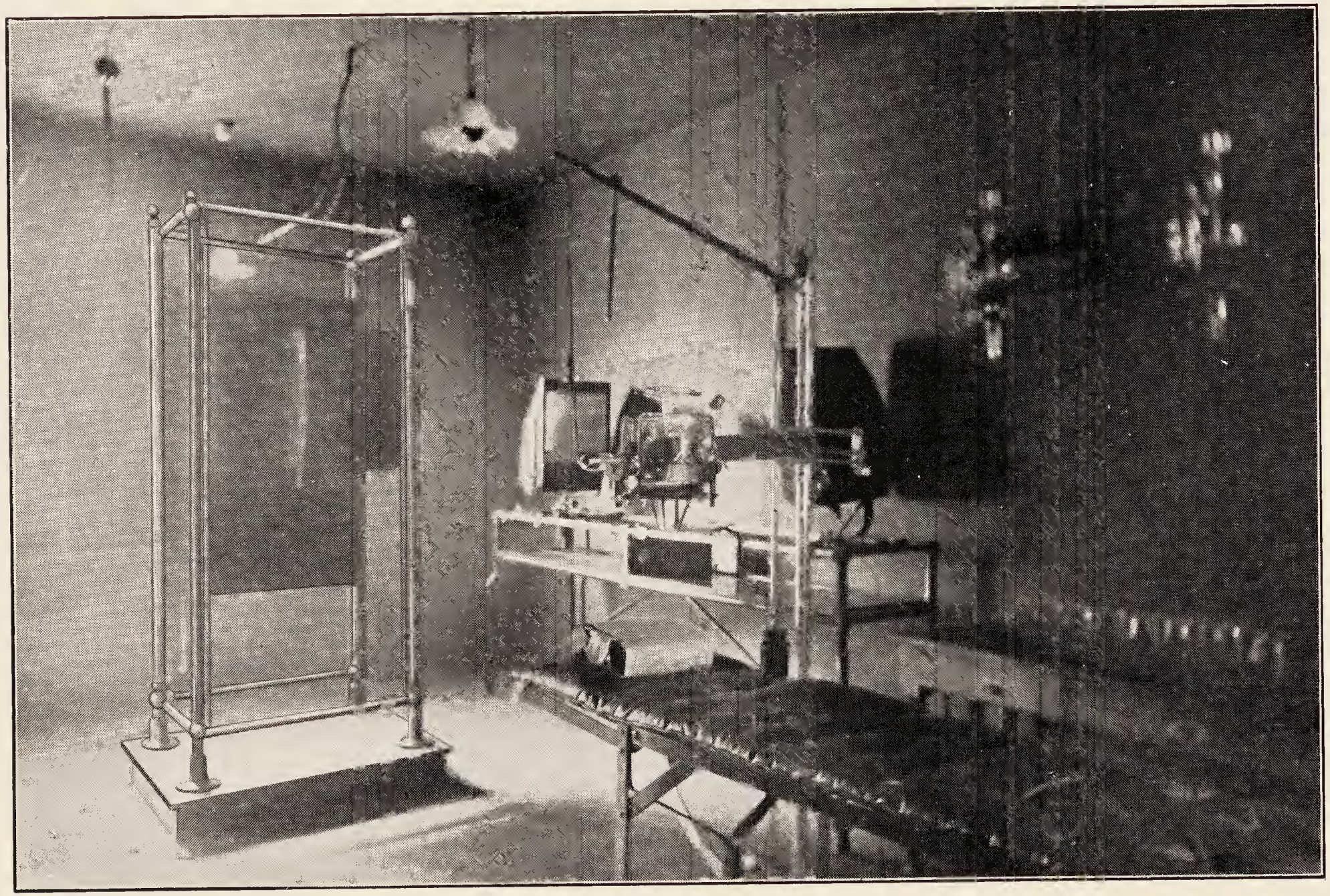
Glandular Tuberculosis.

Seven children were found to be affected with tuberculosis of the glands, being 0·11 per cent. of those examined.

Osseous Tuberculosis.

Of the children systematically inspected, seven were suffering from tuberculosis disease of the bones or joints.

The following table shows the number of children examined and the percentage of cases of tuberculosis discovered.



School Clinic.—X Ray Room.

	Number systematically examined.	TUBERCULOSIS OF								TOTAL	
		LUNGS		GLANDS		BONES and JOINTS		PERI-TONIUM			
		Cases	Per-c'ntage	Cases	Per-c'ntage	Cases	Per-c'ntage	Cases	Per-c'ntage	Cases	Per-c'ntage
Entrants	2041	2	0·1	4	0·19	1	0·05	–	–	7	0·34
Intermediates....	2114	3	0·14	2	0·09	3	0·14	2	0·09	10	0·46
Leavers	1857	1	0·05	1	0·05	3	0·16	1	0·05	6	0·31
Total	6012	6	0·10	7	0·11	7	0·11	3	0·05	23	0·37

The total number of children suffering from tuberculosis known at present to the medical department, is 117. Sixteen deaths from tuberculosis in children of school age occurred during the year. It is certain that the extent of the disease among children is as yet unknown.

There is need for a residential institution at which education in a certified school might be provided, so that patients could remain under appropriate treatment for a sufficient period without loss of education. The linking up of such an institution with school medical inspection would be of incalculable benefit to the district.

Other Diseases of the Lungs.

The following table shows the extent of the diseases of the respiratory organs, discovered amongst the children examined.

	Number examined	BRONCHITIS		OLD EMPYEMA		TOTAL	
		Cases	Per-centage	Cases	Per-centage	Cases	Per-centage
Entrants	2041	58	2·84	—	—	58	2·84
Intermediates.....	2114	45	2·12	1	0·04	46	2·16
Leavers	1857	12	0·64	—	—	12	0·64
Total	6012	115	1·90	1	0·01	116	1·90

Deformities.

The following is a classification of the children amongst those system atically inspected found to be deformed :—

Cleft palate	3
Club foot	1
Hernia	1
Hydrocephalic head	1
Lungs	1
Scars from injuries or burns.....	13
Disease of jaw	1
	21

Diseases of the Skin.

The following table gives an analysis of the diseases of the skin, discovered during the inspection of 6,012 children :

	Entrants	Inter-mediates	Leavers	Total
Ringworm, scalp	9	4	4	17
,, skin	—	1	3	4
Scabies	1	—	—	1
Impetigo.....	18	20	6	44
Eczema of the scalp...	—	1	—	1
Alopecia	1	1	5	7
Herpes	2	1	1	4
Psoriasis	—	—	1	1
Head sores.....	1	1	—	2
Body sores.....	3	2	—	5
	35	31	20	86

It will be observed that the number of cases of ringworm of the skin and scalp is unusually few. It is probable that a systematic "class to class" examination of every child now being carried out at regular intervals throughout the schools, will bring other cases to light.

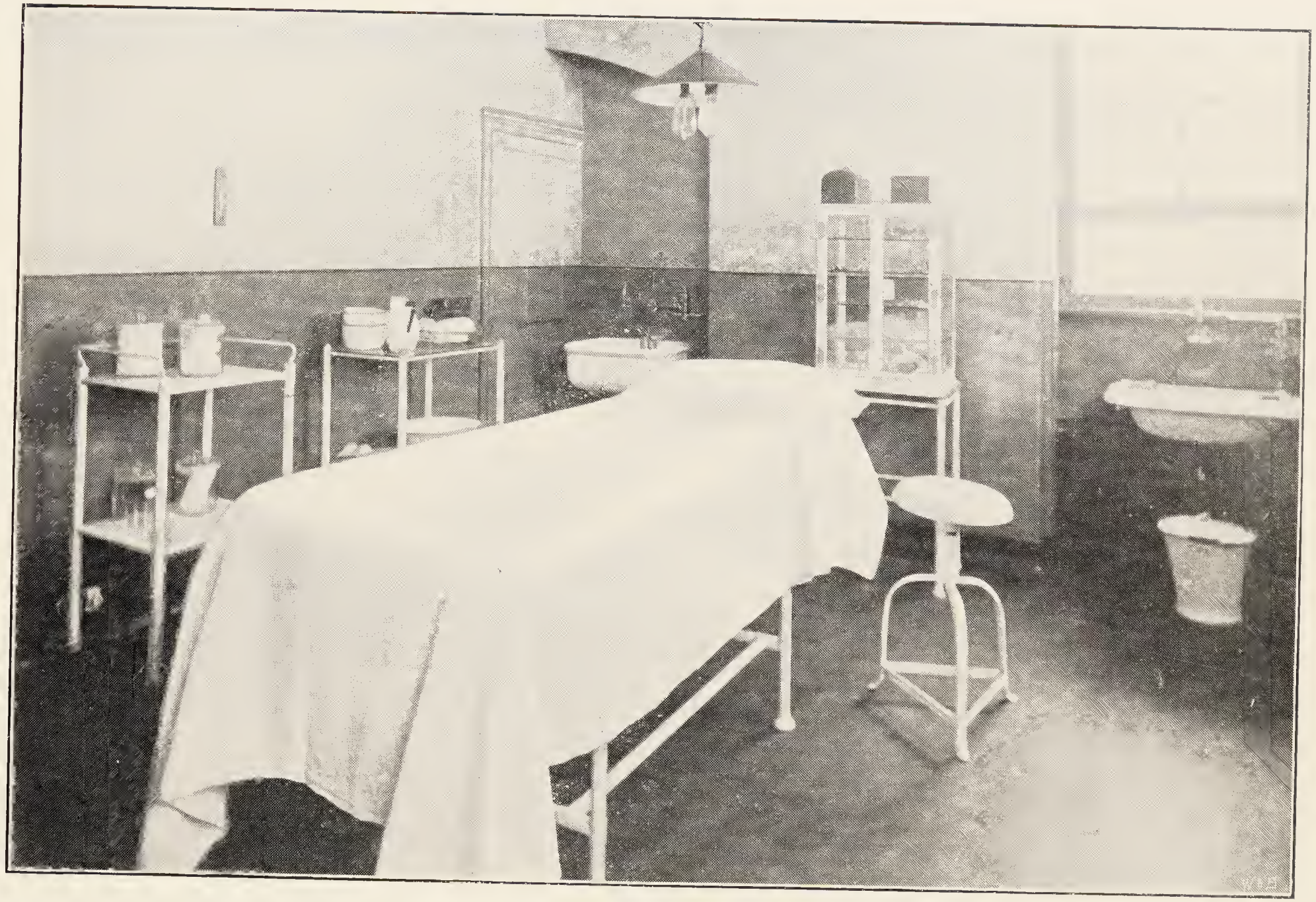
Infectious Disease.

The following cases of infectious disease were discovered amongst children attending school :—

	Entrants	Inter-mediates	Leavers	Total
Measles	2	—	—	2
Mumps	3	1	2	6
Chicken-pox	1	1	—	2
Scarlet fever	—	1	—	1

INSPECTION CLINIC.

An inspection clinic has been held in the medical officer's department at the town hall since 1906, and an increasing number of cases has been seen there each year, in fact, the work of the inspection clinic is growing to such an extent that the necessity of providing further accommodation has already arisen. Children attend for examination on Wednesdays, from 3–0 to 5–30, and on Saturdays from 9–0 to 11. Some overcrowding not infrequently occurs, it is attempted to prevent this as much as possible by giving a specified time for the attendance of certain children, this arrangement, however, although desirable, can not obviate the necessity of a large airy waiting room, since school teachers, attendance officers and parents, knowing that the clinic is open at stated periods, send up children concerning whose condition they wish for information.



School Clinic.—Operating Room.

During 1913, 1,273 children were seen at the clinic, a total of 3,137 attendances being made. The children were sent to the clinic by the following agencies :—

School Attendance Officers	469
Teachers	324
Medical Officer's Department	144
Parents	276
Medical Practitioners	24
Children's Care Committee	27
Fresh Air Fund	8
Other Agency	1

The following table shows the conditions from which the children were suffering :—

Head.	
Sores	48
Other diseases	5
Skin.	
Ringworm, scalp	116
Ringworm, body	68
Favus	1
Scabies	113
Impetigo	56
Sores	47
Psoriasis	5
Eczema	16
Other diseases	25
Throat and Nose Defects.	
Enlarged tonsils and adenoids	19
Enlarged tonsils	13
Adenoids	14
Other diseases	24
Glands.	
Enlarged	21
Suppurating	11
Eyes.	
Conjunctivitis	45
Blepharitis	34
Ulcers	28
Squint	13
Defective vision	65
Other diseases	15
Ears.	
Discharge	26
Deafness	8
Other diseases	1
Mental Conditions.	
Mentally defective	4
Imbeciles	1
Heart.	
Organic disease	13
Anaemia	47
Lungs.	
Bronchitis	27
Suspected phthisis	42
Other diseases	7
Nervous System.	
Epilepsy	13
Chorea	25
Paralysis	8
Tuberculosis.	
Phthisis	46
Glands	11
Bones and joints	15
Abdomen	17
Skin	8
Rickets	5
Kidney Disease	2
Malnutrition.	
Rheumatism	15
Infectious Diseases.	
Scarlet fever	4
Chicken-pox	12
Mumps	7
Measles	1
Whooping cough	6
Erysipelas	1
Other Diseases	68

Of the children, 792, or 61 per cent were not receiving medical attention. The remainder were being treated as follows :—

By private practitioners	258
By hospitals	142
By tuberculosis dispensary.....	46
By other agencies.....	35

The value of an inspection clinic in any well-organised scheme for the inspection and treatment of school children is beyond dispute. It may be looked upon as a clearing-house, and a means whereby the medical officer can obtain a knowledge of the condition of children absent from school. More complete examination can be carried out there than is generally possible in school premises.

THE TREATMENT CLINIC.

In October, 1913, a centrally situated, complete and well equipped school clinic was opened by the Local Authority. The diseases to be treated were those affecting the eyes, ears, nose and throat, and teeth ; ringworm of the scalp by means of X-rays and also minor ailments, together with such other diseases as might be approved from time to time by the Committee.

The treatment of the children at the clinic is generally carried out by private practitioners appointed by the Local Authority. Minor ailments, however, are treated by nurses acting under the directions of the school medical officer. The supervision of the medical and surgical work done at the clinic is in the hands of the school medical officer who is directly responsible to the Committee. The medical practitioners and dentists are part time officers, each attending at the clinic for one half-day per week.

It was decided that children suffering from disease or defect should be classified into three groups according to the financial circumstances of the home. Cases found to be ' necessitous ' are treated free of cost. A fee is recovered from the parents of those ' partially necessitous ' ; while children that are ' non-necessitous ' are as a rule not accepted for treatment. It was arranged that children found on inspection to be defective and obviously necessitous or partially necessitous should be sent direct to the clinic, and in this way it was hoped that very little delay would occu- between inspection and treatment.

The premises comprising the clinic are arranged as follows :—

On the ground floor a waiting room, a room for the clerk dispenser, a consulting room and room for the treatment of eye defects, and a small room fitted up as a surgery for minor ailments. On the first floor a dental

room, an operating room, a recovery room and two rooms given over for the X-ray treatment of ringworm, part of the same building, but distinct from the school clinic, is used as a tuberculosis dispensary. The treatment of minor ailments is carried out daily from 9 to 10. One sitting of two and a half hours per week is devoted to each of the other diseases.

During the short-period that the clinic was in working during the year under consideration, the following number of cases were dealt with :—

	New Cases.	Treatment completed.
Eye defects	57	47
Nose and throat defects	63	41
Diseases of the teeth	80	80
Ringworm of the scalp	19	0
Minor ailments	43	27

The following table shows the nature and extent of the dental treatment.

AGES	Number inspected in schools		Number requiring treatment		Number treated at school clinic		Extraction		Anæsthetics		Fillings		Miscellaneous	
	Boys	Girls	Boys	Girls	Boys	Girls	Temporary	Permanent	Local	Nitrous Oxide	Amalgam	Cement	Pulp Treatment	Scalings & Dressings
5 and under 6...	—	—	—	—	—	2	8	—	2	—	—	—	—	—
6 ,, 7...	366	363	318	299	10	9	96	—	12	7	2	—	—	—
7 ,, 8...	403	369	364	342	28	28	281	1	39	17	43	7	—	1
8 ,, 9...	1	—	1	—	2	4	28	9	2	4	—	—	—	—
	770	732	683	641	40	43	413	10	55	28	45	7	—	1

" *Review of action taken to detect and prevent the spread of infectious diseases, including reference to action taken under Article* 45 (*b*) *and* 57 *of the Code of* 1908.

On the occurrence of notifiable infectious disease in a school child or in a house from which a child attends school, an exclusion notice is sent to the parents, the school attendance department and the head teacher, and a re-admission form is issued when the child or home becomes free from infection. A complete set of notices relating to each case makes up one page in the register. It is, therefore easy to see at any particular moment the number of children excluded from school and the date of exclusion or re-admission. Teachers are instructed to notify at once to the medical officer of health all cases or suspected cases of infectious or contagious disease coming to their knowledge. Books of suitable forms have been provided for the purpose. The number of notifications received during the year was as follows :—

Measles	1317
Mumps	253
Whooping cough	37
Chicken-pox	254
Scarlet fever	158
Diphtheria	31
Ringworm	45
Scabies	15
Other diseases	313

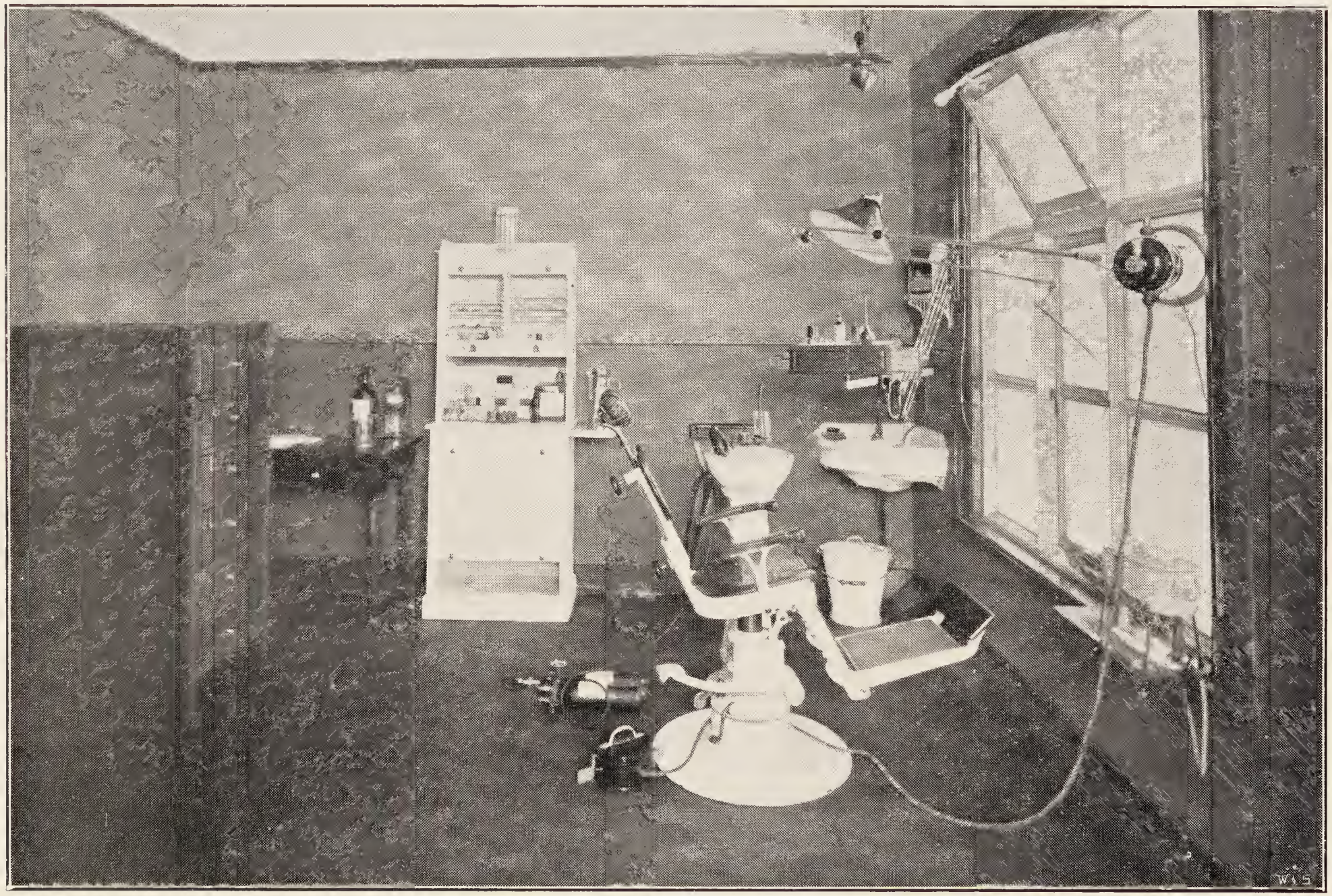
Measles was prevalent in the district during the first quarter of the year. 21 schools were closed on account of the disease for periods given in the following table. Children excluded from school by the medical officer are not permitted to return until a re-admission notice has been issued by him, except in the case of a certain number of children who are excluded by him for a definite period.

Schools Closed for Measles during 1913.

School.	Department.	Period of Closure.
Knowsley Rd. Undenom.	Infant Department	Jan. 13th to 31st.
Christ Church Mission	Whole School	Do. Do.
St. Teresa R.C.	Infant Dept.	Do. Do.
Windle C.E.	Do.	Do. Do.
Merton Bank Council	Do.	Do. Do.
Parr Mount C.E.	Do.	Jan. 27th to Feb. 17th
Peasley Cross C.E.	Do.	Do. Do.
Gerard R.C. (Infant School)	Whole School	Do. Do.
Windleshaw R.C.	Infant Department	Jan 28th Do.
Marshalls Cross (Infant School)	Whole School	Do. Do.
Merton Bank Council	Infant Department	Feb. 10th to Mar. 3rd
Robins Lane Council	Do.	Do. Do.
Sutton C.E.	Do.	Do. Do.
St. Helens Wesleyan	Do.	Do. Do.
Thatto Heath Council	Whole School	Do. Do.
Sacred Heart	Infant Department	Feb. 17th. to Mar. 10
St. Austin	Do.	Feb. 25th—Mar. 24th
Sutton C.E.	Do.	Mar. 10th—Mar. 31st
Nutgrove Wesleyan	Do.	Do. Do.
Sutton Manor	Whole School	Do. Do.
St. Anne's R.C.	Infant Department	Mar. 17th—Apl. 7th.

FOLLOWING UP AND RE-EXAMINATION.

A considerable amount of following up has been accomplished by the school care committees. Towards the latter part of the year it was decided to reorganise the work carried on by the nurses in the medical officer's department, and as a result it has been possible to bring about a more comprehensive scheme of following up. In order that the work of medical inspection and treatment may be approved by the Board of Education,



School Clinic.—Dentists' Room.

it is essential that the following up should be under the control and direct supervision of the school medical officer. It is anticipated that during the present year the re-organisation effected will bring about more complete co-ordination between the various agencies concerned.

During 1913 the nurses made 4,548 visits to the homes of children for the purpose of following up the diseases or defects here classified.

Head.	
Sores	252
Verminous	76
Other diseases	6
Body.	
Ringworm, scalp	38
Ringworm, skin	14
Scabies	39
Impetigo	81
Sores	222
Psoriasis	5
Eczema	97
Other diseases	107
Throat and Nose.	
Enlarged tonsils and adenoids	23
Tonsilitis	73
Other diseases	8
Glands.	
Enlarged	97
Abscesses	75
Eyes.	
Conjunctivitis	212
Blepharitis	98
Corneal ulcers	18
Squints	2
Defective vision	5
Other diseases	2
Ears.	
Discharge	37
Deaf	3
Other diseases	6
Heart.	
Organic disease	2
Anæmia	8
Lungs.	
Bronchitis	47
Suspected phthisis	3
Other diseases	47
Nervous.	
Epilepsy	10
Chorea	27
Paralysis	1
Other diseases.	4
Tuberculosis.	
Lungs	15
Glands	9
Bones and joints	10
Lupus	2
Rickets	3
Kidney Disease	1
Rheumatism	10
Malnutrition	38
Injuries	54
Infectious Diseases.	
Chicken-pox	494
Whooping cough	123
Scarlet fever	45
Diphtheria	6
Mumps	350
Measles	1337
Enteric	1
Erysipelas	1
Influenza	6
Other undefined Diseases	298

Of the children visited, 2,069 were without medical attention.

Towards the end of the year a system of re-examination in school by the medical officers, of cases alleged to have been treated was commenced, 308 children were re-inspected, 151 were found to have received satisfactory treatment, 47 unsatisfactory treatment, and 110 were untreated.

ADMINISTRATION OF THE PROVISION OF MEALS ACT.

The provisions of this Act are administered by the Central Children's Care Committee. Necessitous cases are reported to the district care committees by head teachers and others. Inquiries are then made concerning the circumstances of the parents. If the children cannot be properly fed by the parents owing to unfavourable home conditions, tickets for free breakfasts are given by the head teachers.

Breakfasts are provided at three centres, namely, Higher Grade, Merton Bank, and Robins Lane. The meals are prepared at the centres. They are served by paid attendants under the supervision of teachers who voluntarily give their time to the work. The dietary consists of cocoa with milk, bread and margarine or oatmeal porridge, with syrup or milk on alternative mornings.

The total number of meals provided during the year was 17,538. Breakfasts only are provided. Meals given during school holidays are paid out of a voluntarily contributed fund.

The average total cost per meal is 1·55 pence, while the average cost per meal for food only is 0·94 of a penny.

"*Account of miscellaneous work, such as the examination of scholarship candidates, pupil teachers, or teachers of any grade.*"

AN ACCOUNT OF MISCELLANEOUS WORK.

At the request of the Education Committee, 15 scholarship candidates were medically examined, and under regulations made by the Committee relating to teachers absent from duty, medical certificates were granted on 14 occasions.

"*Review of—*

(1) *The methods and results of instruction in personal hygiene and temperance in the Public Elementary Schools in the area ;*

(2) *The methods and results of physical or breathing exercises in the Schools ;*

TEACHING OF HYGIENE AND TEMPERANCE.

No general scheme for the teaching of these subjects has been adopted in the borough. In some of the schools, however, the work is performed by individual teachers. Physical and breathing exercises are carried out in each school. No arrangements have yet been made for open-air schools, school camps or similar institutions. A comprehensive scheme, however, is now under the consideration of the Local Authority.

TABLE A.—Children examined in 1913.

School	5		7		12		Total Exam.	Total absent	Absentees.		
	M	F	M	F	M	F			5	7	12
Allanson Street	23	29	33	26	41	35	187	6	3	2	1
Blackbrook	21	17	25	27	20	20	130	3	1	2	—
Christ Church	20	21	16	16	19	18	110	6	1	4	1
Crown Glass	—	—	—	—	4	—	4	—	—	—	—
Gerard	32	31	27	34	—	—	124	8	3	5	—
Higher Grade	52	44	48	37	61	57	299	12	8	2	2
Holy Cross	24	25	32	24	56	30	191	13	6	3	4
Knowsley Road	43	43	35	34	37	31	223	18	7	9	2
Laffak	5	3	9	3	4	1	25	—	—	—	—
Lowe House	40	35	38	28	49	43	233	13	—	6	7
Marshalls Cross	9	14	12	11	—	—	46	2	1	1	—
Merton Bank	37	31	46	28	59	60	261	18	9	3	6
Nutgrove Wesleyan	20	22	22	36	30	25	155	19	12	6	1
Parish Church	25	27	19	15	15	24	125	19	5	8	6
Parr Flat	24	22	25	21	—	—	92	6	3	3	—
Parr Mount	28	37	30	26	29	17	167	19	12	5	2
Peasley Cross C.E.	17	17	27	18	—	—	79	6	6	—	—
Ravenhead	18	13	30	18	19	17	115	36	18	16	2
Rivington Road	47	57	54	59	41	48	306	15	7	5	3
Robins Lane	36	32	42	39	56	39	244	10	4	5	1
Sacred Heart	35	44	54	59	57	32	281	20	12	5	3
Sutton C.E.	49	60	59	58	63	46	335	29	14	13	2
Sutton Manor	7	8	10	6	4	4	39	2	2	—	—
Sutton St. Joseph	22	19	16	19	12	12	100	2	—	—	2
St. Anne's	40	30	33	42	49	30	224	6	—	—	6
St. Austin	19	21	20	19	12	14	105	15	—	10	5
St. Helens Und.	30	32	27	39	31	40	199	3	—	2	1
St. Helens Wes.	12	12	17	13	26	16	96	2	2	—	—
St. John's	12	8	14	14	1	1	50	9	5	4	—
St. Joseph, Parr	48	42	43	34	—	22	189	11	6	5	—
St. Mary's	—	—	—	3	48	32	83	9	—	—	9
St. Mary's, York St.	38	36	49	53	—	—	176	14	8	6	—
St. Patrick	22	25	13	13	—	12	85	5	3	2	—
St. Peter	37	24	25	25	30	12	153	1	—	1	—
St. Teresa	22	16	19	22	15	21	115	14	9	4	1
St. Thomas	46	50	44	52	40	32	264	7	3	3	1
St. Vincent	20	11	19	10	15	5	80	14	5	6	3
Thatto Heath	16	20	24	19	34	32	145	1	—	1	—
Windle	27	18	27	13	17	17	119	16	10	5	1
Windleshaw	17	5	13	5	10	8	58	1	—	—	1
Totals	1040	1001	1096	1018	1004	853	6012	410	185	152	73

NUTRITION.

School.	5				7				12			
	Total Exam	Good	Fair	Bad	Total Exam	Good	Fair	Bad	Total Exam	Good	Fair	Bad
Allanson Street	52	21	20	11	59	17	14	28	76	14	15	47
Blackbrook	38	16	12	10	52	20	15	17	40	8	14	18
Christ Church	41	19	11	11	32	9	12	11	37	13	9	15
Crown Glass	—	—	—	—	—	—	—	—	4	2	1	1
Gerard	63	29	25	9	61	22	17	22	—	—	—	—
Higher Grade	96	42	21	33	85	29	14	42	118	43	22	53
Holy Cross	49	19	22	8	56	25	18	13	86	31	19	36
Knowsley Road	86	54	19	13	69	44	15	10	68	46	10	12
Laffak	8	4	1	3	12	6	2	4	5	3	—	2
Lowe House	75	35	35	5	6	18	30	18	92	26	30	36
Marshalls Cross	23	18	3	2	23	14	9	—	—	—	—	—
Merton Bank	68	24	23	21	74	27	19	28	119	25	30	64
Nutgrove	42	22	11	9	58	28	12	18	55	19	13	23
Parish Church	52	35	10	7	34	22	8	4	39	24	7	8
Parr Flat	46	10	24	12	46	7	24	16	—	—	—	—
Parr Mount	65	56	8	1	56	31	21	4	46	34	9	3
Peasley Cross C.E.	34	24	5	5	45	27	9	9	—	—	—	—
Ravenhead	31	12	14	5	48	22	11	15	36	10	11	15
Rivington Road	104	30	48	26	113	29	37	47	89	22	25	42
Robins Lane	68	24	28	16	81	23	25	33	95	23	30	42
Sacred Heart	79	47	18	14	113	47	28	38	89	36	26	27
Sutton C.E.	109	44	53	12	117	35	47	35	109	29	40	40
Sutton Manor	15	9	4	2	16	8	5	3	8	1	4	3
Sutton St. Joseph	41	25	12	4	35	18	11	6	24	12	4	8
St. Anne's	70	53	15	2	75	49	13	13	79	38	25	16
St. Austin	40	17	13	10	39	12	6	21	26	5	6	15
St. Helens Und.	62	31	25	6	66	32	19	15	71	30	16	25
St. Helens Wesleyan	24	13	8	3	30	10	10	10	42	15	11	16
St. John	20	11	6	3	28	12	9	7	2	1	—	1
St. Joseph, Parr	90	36	38	16	77	26	27	24	22	4	9	9
St. Mary	—	—	—	—	3	2	1	—	80	25	30	25
St. Mary, York Street	74	50	18	6	102	51	36	15	—	—	—	—
St. Patrick	47	22	15	10	26	5	14	7	12	4	4	4
St. Peter	61	22	21	18	50	16	16	18	42	17	18	7
St. Teresa	38	19	14	5	41	21	11	9	36	5	18	13
St. Thomas	96	51	21	24	96	35	21	39	72	25	19	28
St. Vincent	31	17	10	4	29	17	6	6	20	12	5	3
Thatto Heath	36	23	5	8	43	18	11	14	66	24	17	25
Windle	45	28	14	3	40	20	11	9	34	11	9	14
Windleshaw	22	14	8	—	18	10	6	2	18	12	2	4
Totals	2041	1026	658	357	2114	864	620	630	1857	649	508	700

TABLE B.—Hygienic Conditions.

SCHOOL.	Group.	Number of Children.	Clothing Insuffic'nt	Footwear.		Condition of Head.						Condition of Body.		
						Boys.			Girls.					
				Boots	Clogs	Clean	Dirty	Verm	Clean	Dirty	Verm	Clean	Dirty	Verm
Allanson Street	I.	52	1	6	46	23	—	—	17	1	11	50	—	2
	II.	59	1	16	43	33	—	—	17	—	9	57	—	2
	IV.	76	—	10	66	41	—	—	19	—	16	74	1	1
Blackbrook.....	I.	38	2	17	21	21	—	—	11	—	6	37	—	1
	II.	52	1	5	47	25	—	—	14	—	13	50	—	2
	IV.	40	—	10	30	20	—	—	12	—	8	59	1	—
Christ Church	I.	41	—	35	6	20	—	—	18	—	3	39	—	2
	II.	32	1	21	11	16	—	—	10	—	6	32	—	—
	IV.	37	2	31	6	18	—	1	12	—	6	35	1	1
Crown Glass	I.	—	—	—	—	—	—	—	—	—	—	—	—	—
	II.	—	—	—	—	—	—	—	—	—	—	—	—	—
	IV.	4	—	1	3	4	—	—	—	—	—	4	—	—
Gerard.....	I.	63	12	27	36	29	2	1	20	—	11	55	2	6
	II.	61	3	23	38	22	1	4	13	—	21	56	2	3
	IV.	—	—	—	—	—	—	—	—	—	—	—	—	—
Higher Grade	I.	96	2	84	12	52	—	—	42	—	2	96	—	—
	II.	85	1	78	7	48	—	—	32	—	5	84	1	—
	IV.	118	—	118	—	61	—	—	50	—	7	118	—	—
Holy Cross.....	I.	49	3	29	20	23	—	1	13	—	12	47	—	2
	II.	56	6	33	23	30	—	2	3	—	21	51	—	5
	IV.	86	1	37	49	50	—	6	18	—	12	85	—	1
Knowsley Road	I.	86	6	51	35	40	—	3	21	—	22	81	—	5
	II.	69	—	25	44	33	—	2	18	—	16	69	—	—
	IV.	68	1	36	32	37	—	—	14	—	17	63	—	5
Laffak	I.	8	—	3	5	5	—	—	1	—	2	8	—	—
	II.	12	2	5	7	8	—	1	1	—	2	11	—	1
	IV.	5	—	1	4	4	—	—	1	—	—	5	—	—
Lowe House	I.	75	3	52	23	31	—	9	24	—	11	58	—	17
	II.	66	7	42	24	32	—	6	14	1	13	60	—	6
	IV.	92	6	55	37	35	—	14	16	—	27	78	—	14
Marshalls Cross	I.	23	—	11	12	9	—	—	12	—	2	23	—	—
	II.	23	—	10	13	11	—	1	7	—	4	22	—	1
	IV.	—	—	—	—	—	—	—	—	—	—	—	—	—
Merton Bank	I.	68	5	20	48	33	2	2	20	1	10	64	1	3
	II.	74	4	20	54	42	1	3	19	—	9	68	3	3
	IV.	119	9	25	94	57	1	1	32	—	28	112	2	5
Nutgrove	I.	42	—	31	11	20	—	—	13	—	9	41	1	—
	II.	58	2	45	13	21	—	1	29	—	7	58	—	—
	IV.	55	2	39	16	30	—	—	13	—	12	53	1	1
Parish Church	I.	52	1	34	18	22	—	3	17	—	10	50	—	2
	II.	34	—	17	17	14	—	5	5	—	10	32		2
	IV.	39	—	22	17	14	1	—	15	—	9	36	—	3

TABLE B.—*Continued.*

SCHOOL.	Group.	Number of Children.	Clothing Insufficient.	Footwear.		Condition of Head.						Condition of Body.		
						Boys.			Girls.					
				Boots	Clogs	Clean	Dirty	Verm	Clean	Dirty	Verm	Clean	Dirty	Verm
Parr Flat	I.	46	3	4	42	24	—	—	8	—	14	42	—	4
	II.	46	—	3	43	21	—	4	12	—	9	44	—	2
	IV.	—	—	—	—	—	—	—	—	—	—	—	—	—
Parr Mount	I.	65	—	20	45	26	—	2	35	—	2	64	—	1
	II.	56	1	13	43	25	2	3	17	—	9	55	—	1
	IV.	46	1	14	32	20	3	6	11	—	6	44	—	2
Peasley Cross C.E.	I.	34	1	10	24	17	—	—	16	—	1	33	—	1
	II.	45	1	12	33	25	—	2	5	—	13	38	7	—
	IV.	—	—	—	—	—	—	—	—	—	—	—	—	—
Ravenhead	I.	31	1	20	11	17	—	1	11	—	2	31	—	—
	II.	48	—	27	21	30	—	—	12	—	6	46	—	2
	IV.	36	—	27	9	19	—	—	15	—	2	35	—	1
Rivington Rd.	I.	104	—	92	12	46	—	1	49	—	8	102	—	2
	II.	113	5	96	17	49	2	3	45	—	14	110	1	2
	IV.	89	1	77	12	22	—	19	46	—	2	87	—	2
Robins Lane	I.	68	3	21	47	32	—	4	19	—	13	57	1	10
	II.	81	—	40	41	39	2	1	22	—	17	76	1	4
	IV.	95	1	40	55	56	—	—	25	—	14	89	1	5
Sacred Heart	I.	79	3	48	31	33	—	2	32	—	12	71	—	8
	II.	113	6	46	67	53	1	—	31	1	27	106	1	6
	IV.	89	—	33	53	57	—	—	11	—	21	80	1	8
Sutton C.E.	I.	109	2	43	66	47	2	—	45	2	13	101	—	8
	II.	117	2	52	65	56	1	2	31	—	27	109	—	8
	IV.	109	2	36	73	62	—	1	31	—	15	103	1	5
Sutton Manor	I.	15	—	5	10	7	—	—	8	—	—	15	—	—
	II.	16	—	9	7	10	—	—	6	—	—	16	—	—
	IV.	8	—	1	7	4	—	—	4	—	—	8	—	—
Sutton St. Joseph.	I.	41	—	3	38	22	—	—	13	—	6	37	4	—
	II.	35	2	9	26	16	—	—	19	—	—	31	4	—
	IV.	24	1	3	21	12	—	—	3	—	9	16	7	1
St. Annes	I.	70	—	26	44	37	—	3	24	—	6	70	—	—
	II.	75	—	29	46	28	—	5	21	—	21	72	—	3
	IV.	79	—	28	51	46	—	3	18	—	12	72	—	7
St. Austin	I.	40	2	16	24	19	—	—	14	—	7	39	—	1
	II.	39	2	10	29	19	—	1	14	—	5	37	1	1
	IV.	26	—	10	16	12	—	—	6	—	8	26	—	—
St. Helens Und.	I.	62	5	32	30	25	—	5	14	—	18	58	—	4
	II.	66	5	32	34	24	2	1	20	—	19	60	1	5
	IV.	71	4	39	32	30	—	1	12	—	28	65	—	6
St. Helens Wesleyan	I.	24	4	15	9	8	—	4	8	—	4	21	—	3
	II.	30	1	17	13	16	—	1	8	—	5	26	2	2
	IV.	42	1	19	23	22	2	2	6	—	10	38	2	2

TABLE B.—*Continued.*

SCHOOL.	Group	Number of Children.	Clothing Insufficient	Footwear.		Condition of Head.						Condition of Body.		
						Boys.			Girls.					
				Boots	Clogs	Clean	Dirty	Verm	Clean	Dirty	Verm	Clean	Dirty	Verm
St. John	I.	20	—	4	16	12	—	—	4	—	4	20	—	—
	II.	28	—	7	21	14	—	—	7	—	7	28	—	—
	IV.	2	—	—	2	—	1	—	—	—	1	1	1	—
St. Joseph, Parr	I.	90	17	27	62	42	3	3	23	—	19	77	—	13
	II.	77	15	20	56	35	3	5	16	—	18	72	—	5
	IV.	22	3	5	17	—	—	—	10	—	12	20	—	2
St. Mary.....	I.	—	—	—	—	—	—	—	—	—	—	—	—	—
	II.	3	—	3	—	—	—	—	3	—	—	3	—	—
	IV.	80	—	51	29	47	—	1	25	—	7	78	—	2
St. Mary, York St. ..	I.	74	—	45	29	33	—	5	11	—	25	71	—	3
	II.	102	—	54	48	42	3	4	34	—	19	101	—	1
	IV.	—	—	—	—	—	—	—	—	—	—	—	—	—
St. Patrick	I.	47	14	10	33	17	2	3	6	—	19	28	1	18
	II.	26	5	3	22	10	1	2	2	—	11	23	1	2
	IV.	12	1	7	5	—	—	—	4	—	8	9	—	3
St. Peter	I.	61	—	9	52	37	—	—	8	—	16	59	—	2
	II.	50	—	2	48	25	—	—	15	—	10	49	—	1
	IV.	42	—	3	39	30	—	—	3	—	9	42	—	—
St. Teresa	I.	38	3	26	12	18	—	4	6	—	10	35	—	3
	II.	41	2	19	22	15	—	4	16	—	6	32	1	8
	IV.	36	2	21	15	13	—	2	9	—	12	29	—	7
St. Thomas	I.	96	—	46	50	43	1	2	28	—	22	95	—	1
	II.	96	3	46	50	42	—	2	16	—	36	95	—	1
	IV.	72	—	42	30	40	—	—	19	—	13	70	1	1
St. Vincent.....	I.	31	—	—	31	19	—	1	3	—	8	31	—	—
	II.	29	—	—	29	18	1	—	5	—	5	26	—	3
	IV.	20	—	—	20	11	—	4	1	—	4	20	—	—
Thatto Heath	I.	36	—	5	31	16	—	—	15	—	5	34	—	2
	II.	43	—	9	34	23	—	1	8	—	11	41	—	2
	IV.	66	—	20	46	34	—	—	22	—	10	63	1	2
Windle	I.	45	—	33	12	27	—	—	10	—	8	44	—	1
	II.	40	—	27	13	26	—	1	5	—	8	39	—	1
	IV.	34	—	21	13	16	—	1	9	—	8	33	—	1
Windleshaw	I.	22	—	21	1	17	—	—	5	—	—	22	—	—
	II.	18	—	18	—	12	—	1	4	—	1	18	—	—
	IV.	18	—	18	—	10	—	—	7	—	1	18	—	—
Totals		6012	209	2824	3178	2911	40	189	1719	6	1147	5657	57	29

APPENDIX.

THE AFTER-CARE OF THE CONSUMPTIVE.

By S. J. C. Holden, M.B., D.P.H.

In discussing the after-care of the consumptive it is necessary to take into consideration, first of all, the different stages of the disease. A simple classification is probably as follows.

(*a*) The consumptive suffering from the disease in its very earliest stage, who can in most cases be repaired and regain full health and who may with precaution resume his or her former occupation without detriment to health restored ;

(*b*) The consumptive suffering from a more advanced stage of the disease, who can be so far repaired that he or she can follow an occupation suitable to their condition ;

(*c*) The consumptive suffering from disease so advanced that there is little hope of permanent improvement in health or ability to resume any occupation and for whom segregation is the only truly preventive arrangement.

If the sanitary authority conscientiously undertakes to segregate as far as possible all cases in class (*c*), there is then little or no need for after-care of these cases. If on the other hand little effort is made in this direction, class (*c*) must become the most urgent and necessary object of vigorous after-care treatment. The majority of these cases, living as they do under the worst social conditions of housing, overcrowding and poverty, will need the constant attention of a large staff of health visitors, whose efforts must be superhuman to overcome the indifference and ignorance prevailing in such cases. Even daily visiting would be insufficient to prevent some other member of the household becoming at no distant date a victim of this scourge through contact with the case.

The after-care of classes (*a*) and (*b*) certainly offers a brighter prospect.

In the former class, residence in a sanatorium for some period with the benefit of education obtained in such institution, a subject, to which reference will be made later in this paper, and regular attendance after discharge at the tuberculosis dispensary both for supervision and advice will go far towards the maintenance of a good state of health and full working capacity.

The latter class probably need more attention in aftercare treatment.

It is an unfortunate circumstance that many patients in this class, after being restored to comparatively good health and fair working capacity, break down either through returning to a home, where it is impossible to adopt the treatment taught in the sanatorium, or to employment too arduous or unsuitable, or to financial embarrassment or destitution; sometimes through their own indifference. They then gradually drift into the class of advanced case, becoming daily a greater source of danger to the community. Much can and ought to be done by suitable after-care to prevent this drifting.

To discuss for a brief period the functions of a sanatorium. Primarily, a consumptive is admitted to a sanatorium that his disease may be arrested and he may be restored to good health; but, equally as important, he is taught how to maintain that state of health. The benefits of fresh air, suitable food and rest are soon impressed upon his memory. He also learns the precautions necessary for preventing the spread of the disease so that, if he adopts those precautions, he ceases to be a source of danger to his fellowmen. On his discharge from the sanatorium the consumptive generally is willing and anxious to put into practical form the lesson he has learned. But the problem immediately arises on his return to former surroundings "How can it be done?" It cannot be done unless he receives the benefits of judicious after-care. If such benefits are not provided the consumptive loses the optimistic mental attitude so essential to his future well-being, and in despair neglects every precaution necessary to protect himself and the community.

Having discussed the different classes of consumptive to be dealt with and shewn the necessity for instituting in the interests of public health some form of after-care treatment, the main features of an after-care scheme may now be suggested.

The two chief problems, to which attention must be devoted, are housing and employment. In both cases the financial burdens, such

provisions entail, are responsible for the delay in getting to work with a suitable scheme. But the fact must not be lost sight of that such public expenditure is an investment which will give a return incalculable in the matter of men and women, who, when maintained in a working capacity, will be an economical asset to the community.

Where any scheme of housing or town planning is promulgated, it would be well for the local authority to cast a thought upon the special needs and circumstances of the consumptive. Some writers are advocating the formation of farm colonies or garden cities, where patients may live in community and each follow a suitable profession or trade, the whole being worked on the principles of co-operation. The time is not yet ripe for such idealistic measures; moreover, if such a scheme is to merit any success, it must be planned on a scale much larger than can be undertaken by a single authority.

There can be little difficulty in most towns in finding some locality in the neighbourhood of suitable elevation and aspect with the necessary protection from cold winds, where dwellings for consumptives could be constructed. The detached cottages, which would be built on this site, must be planned to reproduce on a small scale all the structural features of a modern sanatorium. The upper room on the southern or south-western aspect of the cottage would be occupied by the consumptive member of the family alone and so constructed that it has free access to the external air on at least three sides, with some contrivance for deflecting wind and rain. Care must be taken that the occupant has no opportunity completely to close his room from the external air.

The floors and walls should be constructed of impervious material so that they can be washed down, and all corners and ledges, where dust can collect, eliminated. There must be an absolute minimum of furniture and no curtains or hangings.

These cottages, though more expensive in construction, would not be rented higher than the average cottage rents of the neighbourhood. They would be occupied in the majority of cases by male consumptives who are able to work and are married, or by consumptive wives. If the consumptive can only work intermittently or receives a small wage, some assistance in paying the rent might reasonably be considered by the local authority or insurance committee, if now or in the future empowered to do so.

The tuberculosis officer and health visitors would exercise some

supervision over these cottage homes; visits being paid at such times as the consumptive is not at work.

Should this be considered a scheme too elaborate or too costly to undertake, the local authority might take steps to convert one room of the consumptive's present dwelling into a state reasonably fit for maintenance of health. The window would need to be enlarged and fitted to always remain open yet protect from rain and wind. Walls and floors would be repaired to conform to the best sanitary conditions. Perhaps bed, bedding, and furniture would be supplied. The consumptive must be informed that he or she alone must occupy this apartment.

On inspection it may sometimes be found that the consumptive's home is in such a poor sanitary or structural condition that it would be impossible to effect any useful alteration or it may be situated in an unsuitable locality. The local authority would then offer to assist in paying the increased rent of a superior house in a better locality where the consumptive would have some prospect of maintaining his health.

In the case of male and female consumptives who are able to follow some employment and are unmarried or have no one dependent upon them, suitable hygienic accommodation could be provided in the form of a municipal lodging house. If the sanatorium estate of the local authority is in close proximity to the town, this building might reasonably be situated in or close to the sanatorium grounds and be under the supervision of the medical officer resident at the sanatorium.

Otherwise, as in the case of the special cottages, some suitable site must be chosen, care bing taken that the distance the majority of the occupants have to go to work is reasonable. This building would be under the supervision of the tuberculosis officer.

In each case the building would consist of dormitories for each sex with adequate washing, bathing, and lavatory accommodation, the dormitories to be built preferably in sets of cubicles, some containing two beds, others containing one. The cubicle would approximate in design the latest sanatorium plans of the Local Government Board. In addition to dormitories it would be necessary to provide separate dining rooms for each sex, kitchens, laundry or wash-houses and apartments for a married caretaker. The occupants would pay an inclusive charge each week to include provision of all meals. There should be few or no extra charges. Two or three scales of diet may be provided (which would differ only in the variety of food offered and not in nutritive value), for which slightly increased charges would be made.

The second great problem in the after-care of the consumptive is that of employment.

First let us consider the employer of labour.

It is an unfortunate circumstance that the trend of modern preventive methods in the campaign against tuberculosis is to attach more firmly to the victim the label "consumptive." Compulsory notification, visits by health visitors and other members of the sanitary staff all tend to rivet attention on the sufferer. When the consumptive leaves the sanatorium and again tries to resume his former occupation or to find fresh employment, the employer is rather liable to regard him with suspicion, and, owing to the fear that his other employees are running some risk by working with a consumptive, finds some excuse for refusing employment.

It is therefore necessary that the employer be educated as well as the employee and this unfounded fear eradicated as soon as possible. If the consumptive had not already received his education in preventive measures during his stay in the sanatorium, there would be some ground for this fear. The employer must recognise that the educated consumptive is not a source of contagion, is probably cleaner in his habits than many of his other employees and can with perfect safety work with other men.

The consumptive, after discharge from the sanatorium, is sometimes able to resume his former occupation without breaking down again. In the majority of cases, however, his former employment has been unsuitable or too arduous and he is faced with the difficulty of finding lighter and more suitable work, which often means some reduction in wage earning capacity. Reduction in wage-earning capacity is an important problem in that it militates against the patient, especially if he has dependants, obtaining suitable and sufficient nourishment and being properly housed; two factors so valuable in maintaining his state of health. This soon leads to destitution and he eventually has to rely on the inadequate provision made by the poor law authorities.

It is to be hoped that in the near future by co-operation between the local health authorities and insurance committees some steps will be taken to shew Parliament the necessity of re-organising the financial provisions of the Insurance Act, extended to dependants, especially with regard to consumptives, so that they may not be faced with the fear of financial embarrassment. A yearly grant in aid from the Treasury would be a powerful stimulus to Authorities to undertake a complete scheme of after-care.

Suitability of employment is a difficulty small in comparison with the other problems of after-care already discussed. Employment to be suitable must as far as possible be under the best conditions of ventilation and lighting with reasonable hours, especially allowing a fair period of time for meals. Open-air employment of all kinds, if not laborious, is the most beneficial.

Most local authorities have at their command open-air work such as that of park-keepers, gardeners, tram drivers and conductors, street cleaners, etc., all suitable for consumptives who have been discharged from a sanatorium as fit for work. The co-operation of employers of labour should be enlisted to allow consumptives to fill some of the vacancies which occur in the different branches of employment, if such employment is considered suitable by the tuberculosis officer. Much of the prejudice against the employment of consumptives would be eliminated if the employers shewed their sympathy towards the campaign by assisting the local authority in finding employment for these cases. With the gain of this co-operation a labour bureau on a small scale might be established by the local health authority where valuable information with regard to posts vacant would be at the disposal of the tuberculosis officer.

It is plain that the responsible authority for organising any system of after-care is the health authority of the county or county borough council. The division of authority between the county and borough councils, insurance committees and poor law guardians for the treatment of tuberculosis is responsible more than any thing else for the delay in completing comprehensive schemes which shall include not only treatment, but, equally as important, after-care. More rapid progress would be made if the insurance committees and poor law authorities were relieved entirely of making provision for the treatment of tuberculosis and the whole burden were taken by the county councils and local health authorities. The latter are already equipped with the necessary machinery for undertaking the work in its entirety. The health committees with the advice of their medical officers of health and the assistance of the tuberculosis officers, school medical inspectors, sanitary inspectors and health visitors are already an army in the field for the campaign of treatment and after-care of the consumptive.

THE TREATMENT OF SCABIES.

By Frank Hauxwell, M.B., Ch.B., D.P.H.

In St. Helens all cases of scabies or suspected scabies occurring amongst school children are seen by the medical officer, who, if the case be one of scabies, excludes the child from school. No case so excluded is allowed to return to school until re-examined by the medical officer and certified by him to be free from infection. In this way, efficient supervision becomes possible. Many of these cases when first seen are slight in extent, and localised, and with proper care and treatment at home can be cured in a short time. In a considerable number, however, the disease is extensively spread over the body before the case comes under observation. For some years past, attempt has been made to treat some of these latter cases by daily bathing at the borough sanatorium together with disinfection of the underclothing at each attendance. Unfortunately, this system while doing some good, has not been found sufficiently effective—the weak points being (1), the irregular attendance of the children, and (2), re-infection from home sources. Especially when nearly healed did the attendances become irregular and unless promptly followed up the children would be found in a very short time as extensively affected as at the commencement of treatment. Even when the attendance was regular, fresh outbreaks were not uncommon due to re-infection in the home from bed-clothing, etc., or from other cases in the house.

It was therefore decided in October, 1913, to make a more vigorous attempt to deal with the disease. For this purpose a system of isolation of actual cases, together with disinfection of the home is now carried out. When possible, six beds have been set aside in the isolation hospital for the reception of cases of scabies, and this number has been augmented at intervals according as the accommodation allowed. The routine procedure now adopted in all cases is :—(1), suspected cases are submitted to the medical officer as previously, (2), slight cases and isolated cases occurring in families are advised regarding treatment and in most cases it is found that directions given are carried out fairly well, and the child recovers within a reasonable time , (3), in other cases, a health visitor visits the home and enquiries regarding the presence of other cases in the home and reports in the general cleanliness of the premises, (4), if there appears no satisfactory means of home treatment, all cases from the house are removed to the sanatorium, the bedrooms are disinfected with formalin, and the bedding, clothing, etc. removed for steam disinfection, (5), should the house be in a very filthy condition, it is dealt with under Public Health

Act, 1875, s. 120. It is hoped that by these means not only will cases be cured more quickly, but that the sources of re-infection will be materially diminished. The scheme is, however, limited by the accommodation, and it has been found necessary to supplement it by dealing with certain selected cases by means of daily baths at the isolation hospital.

During the six months the scheme has been in operation, 18 cases have been admitted, and 11 cases treated by daily baths. The effect of the treatment is shown by the following table which gives the duration in weeks of cured cases treated at home during 1913, together with the duration of cured cases treated at the isolation hospital by daily baths and of those admitted during the past six months.

	Duration in weeks.																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Home treatment ..	–	8	4	6	7	6	2	6	4	4	3	1	1	1	2	2	2	2	–	–	–	1	–	3
Treatment at Isolation Hospital																								
By daily attendance	–	1	1	3	1	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
By admission ..	–	6	4	1	3	2	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

It will be noticed that of those admitted to the isolation hospital, the stay in two cases extended to 8 weeks. This was due in one instance to the child developing chicken-pox 14 days after admission, followed by pneumonia, and in the other case to a persistent dermatitis. The average duration of all cases was :—

Children treated at home during 1913.....8.6 weeks.
Children treated at isolation hospital during past 6 months—

1. By daily baths ..... 4·7 weeks.
2. After admission ..... 3·5 weeks.

If the two cases mentioned be excluded from those admitted, the average for those admitted falls to 2·9 weeks.

It would seem therefore, that admission to the isolation hospital gives the best results though with only 6 months experience of the present scheme, it may be too early to form a definite opinion. It must be remembered that those cases admitted are all more severe than the cases treated by baths, and it is therefore hardly fair to compare the two classes. Undoubtedly the combined scheme of treatment by the local authority means a more speedy return to health and comfort for the child, and a great saving of school attendances.

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